A HISTORY

OF

Hindu Civilisation during British Rule

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IN FOUR VOLUMES

VOL. II.

SOCIO-RELIGIOUS CONDITION
SOCIAL CONDITION
INDUSTRIAL CONDITION

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TO THE MEMORY OF

I'SVARA CHANDRA VIDYA'SA'GARA,

WHO SPENT HIS LIFE

IN THE CAUSE OF INTELLECTUAL AND SOCIAL PROGRESS,

AND WHO DEVOTED HIS ENERGIES AND RESOURCES

TO HELPING

THE POOR AND THE DISTRESSED,

I INSCRIBE THIS VOLUME.

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BOOK II.

SOCIO-RELIGIOUS CONDITION.

CHAPTER I.

CASTE-SYSTEM.

No caste among Rigvedic Aryans,

The Rigveda shows beyond the shadow of a doubt that until towards the very close of the Rigvedic period, the Indo-Aryans were strangers to any kind of caste distinctions among themselves.* Any one who had the gift and the talent to compose hymns which attracted the attention and commanded the admiration of his bre-

* We do indeed, in certain texts, meet with such expressions as *panchajaná*. But *panchajaná* can no more be interpreted to allude to the four *varnas* and the Nisháдas, than to Gandharvas, Pitris, Devas, Asuras and Rákshasas. The very existence of these two interpretations of the term, would shew that they were mere suppositions put forward by Bráhmanical writers long after the composition of the Vedic hymns. (See Muir's "Sanscrit Texts," Vol. I., pp. 176, *et seq.*)

thren, might be honoured with the appellation of 'Bráhman,' that is, a sage, an offerer of prayer. Any one who rose to distinction in the profession of arms might be eulogised under the epithet of 'Kshatriya'—that is, a man possessing power. But 'Brahman' or 'Kshatriya', wise man, or powerful man, he was a 'vis',' that is, one of the people.*

There are however, indications in the Rigveda of a gradual differentiation of two very vaguely defined orders—the Bráhmanas and the Rájanyas. The term Bráhman, which in the earlier part of the Rigvedic period could be applied to any member of the Aryan community who composed hymns and offered up prayers, became restricted towards the latter part of the period to signify a kind of priest. † Later still, the descendants of these priests were, though in only a few passages, ‡ distinguished under the appellation of "Bráhmanas"—a derivative word signifying the sons of a Bráhman. There is, however, nothing to

* Muir's "Sanscrit Texts": Vol. I. (1868) p.p. 240, *et seq.* "If then" says Prof. MaxMuller "with all the documents before us, we ask the question, Does caste, as we find it in Manu and at the present day, form part of the most ancient religious teaching of the Vedas? We can answer with a decided 'No'"—"Chips from a German Workshop" Vol. II. (1868), p. 311.

Speaking of the Rigvedic period, Weber says: "There are no castes as yet, the people are still one united whole, and bear but one name, hat of *Visas*"—"Indian Literature" (translation) p. 38.

† 'Bráhman' (m.) is evidently connected with 'Bráhman' (n.) prayer. There were Vedic poets of regal origin, such as Trasadasyu, Devápi, &c.

‡ See Muir's "Sanskrit Texts," Vol. I., (1868), pp. 258 ff.

shew that the Bráhmans as yet formed an exclusive order.

From the extreme paucity of texts in which the word 'Kshatriya' is appropriated to the nobility, as well as from the all but entire absence of the term 'Rájanya' * which is the alternative designation of that order, and which is related to 'Rájan,' a king, in the same way as 'Bráhmana' is to 'Brahman,' a priest, we may safely infer that the Aryan princes and their relations had not yet come to be separated from the body of the people by anything like a clear line of demarcation. The name assigned to the third caste is 'Vis,' or its derivative 'Vais'ya.' But throughout the Rigveda, except in one of the very latest hymns, (*viz.* the Purusha Súkta) the whole of the Aryan colony, kings, priests, and all, are included under the name 'vis,' people.

Two ethnic castes, Aryan and non-Aryan.

But, before the last notes of the last hymn were chanted by the last of the Rigvedic bards, his brethren had established a caste system—a system composed of two well-defined, exclusive, ethnological castes. Before the Aryans came to India, there had been several waves of non-Aryan immigration. † As the Aryans spread eastward from the banks of the Indus, they came in collision with the aborigines, who naturally enough, opposed their advance, fought them, disturbed their sacrifice and harassed them in endless ways. For such

* This term "Rájanya" occurs only in one hymn, the Purusha Sú'kta.
† Caldwell's "Comparative Grammar," Introduction pp. 108 ff.

acts, which no doubt seemed to the Aryans acts of doubtful courtesy, they called their adversaries, "Dasyus" ('robbers"), "Rakshas" ("evil spirits,") &c. They are described as irreligious, impious, and the lowest of the low; they are also in some texts contemptuously called *black-skinned*—a very significant epithet, as the Sanskrit term for 'Caste' primarily means colour, which points to an original difference of colour as the cause of caste. Thus, during the Rigvedic period, there were, if we may so express ourselves, two 'colors'—the fair (Aryan), and the black (Dasyu or Dása). So long as these two classes were related to each other as belligerents there could be no question of caste. But the Aryans ultimately succeeded in conquering and subjugating their opponents; and instead of exterminating the conquered tribes, or reducing them to a condition of slavery, they followed a policy characterised by comparative mercy and humanity. The aboriginal tribes—now called Súdras*—were incorporated with the Aryan society though on the hard condition, that they should occupy the lowest position in it.

Thus was formed a mixed society composed of two perfectly distinct ethnological castes. This amalgamation of the Aryans and non-Aryans, originally differing in many essential respects from each other, is the key to the most important phenomena in the history of ancient India. The numerical strength of the A'ryas

* In the Atharvaveda, the A'ryas are not only contrasted with Dásas or Dasyus, but also with Sùdras.

was probably vastly inferior to that of the aborigines; but the intellectual and moral superiority of the former was in almost inverse ratio. They exerted enormous influence, not only on the Northern aborigines whom they mostly conquered, but also on the Drávidians of the South, among whom they settled on perfectly amicable terms, but who, nevertheless, tamely acknowledged their supremacy, and voluntarily consented to occupy the social position assigned to them.

Bráhmana period.

As time rolled on, the hymns which the bards of olden times had sung became more and more antiquated. Our Aryan ancestors had great faith in them. Those hymns had led their forefathers to victory, and had brought down countless blessings from above. The art of writing had not yet been invented; and the hymns were very numerous and very long. There were over a thousand of them; and each would, on the average, fill one page of an octavo volume. This was not all; every hymn must be recited in a particular manner—every word, every syllable must be pronounced in a prescribed way. Besides, many idioms of the ancient hymns gradually became obsolete. The Aryan territories gradually covered a considerably wider area; population increased; considerable progress was made in arts and manufactures. Every Aryan was expected to have gone through hymns once. But very few of those who were engaged in the ordinary occupations of life could

afford room in their brains, for a thousand and odd long hymns, with obsolete idioms and expressions, so as to be able to reproduce them at notice. All these circumstances tended to create a class of men, the Bráhmans, who treasured up the hymns in their memory, and officiated at the sacrifices. The accumulation of wealth by the Aryans, who now began to call themselves Dvijas, twice born, furthered the division of labour amongst them, and afforded the Bráhmans opportunity for devoting themselves entirely to their pursuits. The Rigvedic poets belonged, as a rule, to the mass of the people. By far the greater number of their prayers were for cattle, grain, and similar earthly blessings—a fact which shews that they had, like the rest of their community, to struggle for existence. They could not afford much time for speculation—their attention was all but engrossed by temporal objects. But now the Bráhmans obtained leisure for speculating upon theosophical and philosophical subjects, and for elaborating and thus complicating, the sacrificial rites and ceremonies of their ancestors. Consciously or unconsciously, they also enveloped these ritualistic ceremonies in so dark a mystery that none but professional adepts could properly interpret them. Thus the poetical nature-worship of the primitive Indo-Aryans stiffened into a dry creed of sacrifice and penance (Bráhmanism). Liturgical treatises, known as the *Bráhmanas*, containing elaborate rules for the performance of sacrifices, were composed. The minutest rules were framed for penance, not only

Bráhmans

for mistakes committed and observed during the performance of a sacrifice but also for hypothetical omissions which might have slipped the observation of priests. Thus the liturgical literature became so very cumbersome, and the sacrificial ceremonies so very intricate, that the Kshatriyas and Vaisyas were obliged to leave them to the care of the Bráhmans, who were thus created sole trustees, as it were, of the religious welfare of the twice-born classes, and from the nature and importance of their function occupied the highest social rank.

Kshatriyas.

The Kshatriyas or Rájanyas—composed of princes, their kinsmen and followers, became more and more specialised with the gradual extension of Aryan territories and the consequent increase in the number of petty principalities.

Vaisyas.

The mass of the A'ryas formed the third class, Vaisyas. During the earlier years of the Bráhmanic period, however, these three classes must have interlapped. They enjoyed many privileges in common, the most important of which were investiture with the sacred thread, the performance of sacrifice, and the study of the Sástras. The Súdras, however, who formed the fourth and lowest caste, were, as we would expect from the circumstances of their admission into the Aryan society, excluded from all these privileges.

Su'dras.

The duty prescribed for them was to serve the three higher classes. The inborn Aryan pride of birth and spirit of exclusiveness are reflected in the laws which were framed to keep the

Su'dra as distinct from these classes as possible. His condition, however, was much better than slavery. He could choose his own master. The law against his accumulation of wealth could not have been strictly carried out, as in the very book where that law occurs, it is stated that his property should on his death be shared by his children. His master could punish him only as he could punish his son or pupil. And, it is even enjoined that he is to be respected by the Dvijas (A'ryas) in his old age.*

Later Vedic period.

It was not long before the ascendancy of the Bráhmans established during the last period was disputed by the other classes of the Aryan society. The legends representing a Bráhman hero (Ráma Jámadagnya) as having exterminated the Kshatriyas thrice seven times, and, subsequently, as himself vanquished by the Kshatriya Ráma, and various other legends, indicate in unmistakable language the contests that went on between the Bráhmans and Kshatriyas after the establishment of Bráhmanism. The complicated and elaborate sacrificial rites and ceremonies, which were the characteristic features of that religion, formed, as we have seen, the chief basis of Bráhmanic influence. But, the Upanishads now put forth the doctrine of the superiority of spiritual knowledge to sacrificial ceremonies.

* Manu II., 137.

The Bráhmans, however, wisely enough, were liberal and conciliatory towards their opponents. They boldly engrafted the doctrines of the Upanishads and of the systems of philosophy to which these works gave birth upon Bráhmanism itself. They still continued to exert very great influence. But an earnest endeavour was made to restrict this influence to the wise and learned amongst them.*

Gradual elevation of the Su'dras

Another principle feature of the period under review was the gradual elevation of the Súdra class. This was effected in a variety of ways. Outside the limits of the Aryan territories there reigned powerful aboriginal princes. As the population of the A'ryas increased they had to migrate and settle in the dominions of many of these, who, were either classed with the Su'dras, or described as fallen from some one or other of the three higher

* Vasishtha says: "(Bráhmans) who neither study nor teach the Veda nor keep sacred fires become equal to Súdras.

4. The king shall punish that village—where Bráhmans unobservant of their sacred duties and ignorant of the Veda, subsist by begging: for it feeds robbers."

8. "Offerings to the gods and to the manes must always be given to a Srotriya alone. For gifts bestowed on a man unacquainted with the Veda reach neither the ancestors nor the gods.

9. If a fool lives even in one's house and a (Bráhman) deeply learned in the Veda lives at a great distance, the learned man shall receive the gift. The sin of neglecting (a Bráhman is not incurred) in the case of a fool."

11. "An elephant made of wood, an antilope made of leather, and a Bráhman ignorant of the Veda, these three have nothing but the name of their kind." "Sacred Books of the East," Vol. XIV part 2 p.p. 16 *et seq.*

castes. But, however they may have been described by Bráhmanical writers, and whatever may have been the influence of Aryan civilisation upon them, politically and socially they were far superior to the original Súdras. A dynasty of Súdra kings became paramount in Northern India about the fourth century before the Christian era. Then, again, outside the pale of Hindu community there were a great many savage and semi-savage tribes. The Aryan authors manufactured fanciful genealogies for them, made them out to be 'mixed' or 'fallen' castes and assigned them a position below that of the original Su'dras. Thus the lowest caste, of the early and middle Vedic periods came to stand rather high in the social scale in the later Vedic period, for there were now scores of castes below it. The inter-marriage moreover, between Bráhmans and Kshatriyas, Bráhmans and Vaisyas, Bráhmans and Súdras, and between Kshatriyas and Vaisyas, Kshatriyas and Súdras, and so on, tended to bridge over the gulf that had once interposed between the original pure Aryan castes and the aboriginal Su'dras, not so much, if at all, by the establishment of distinct 'mixed' castes, as by that of divisions and subdivisions of the various castes.* In

* The theory of the mixed caste was first enunciated during the period under review. A great many of the so called "mixed castes" however, were clearly names of tribes and races with whom the Hindus came in contact as they spread in India, and as their intercourse with foreigners increased.

Vasishtha says :—

"1. They declare that the offspring of a Súdra and of a female of the Bráhman caste becomes a Chandála.

this intermixture of Aryan and non-Aryan blood, the loss in purity to the higher classes, was a clear gain to the lower. Thus the invidious distinction between the Aryans as a caste of conquerors and the Súdras as a caste of the conquered became less marked than before, and the stain that had once rested on the Su'dra as belonging to a race, separated almost by an impassable barrier from the higher classes, became less deep than before.

Buddhist-Hindu period: Increase of Brahmanic influence.

In the intermixture of Aryan and non-Aryan races which, as we have just seen, took place towards the close of the Vedic period, it was certain sections of the Bráhmans alone that succeeded or claimed to have succeeded in preserving the purity of their blood to any perceptible extent. They inherited the traditions of Aryan learning and Aryan civilisation. They had now the whole field to them-

2. (that of a Sudra and) of a female of the Kshatriya caste a Vaina.

3. (that of a Sudra and) of a female of the Vaisya caste, an Antyavasáyin.

4. They declare that the son begotten by a Vaisya on a female of the Bráhman caste becomes a Ramaka.

5. (The son begotten by the same) on a female of the Kshatriya caste, a Pulkasa.

6. They declare that the son begotten by a Kshatriya on a female of the Bráhman caste becomes a Súta.

8. (Children) begotten by Bráhmans, Kshatriyas and Vaisyas on females of the next lower, second lower and third lower castes become (respectively) Ambashthas, Ugras and Nishádas.

9. (The son of Brahman and) of a Sudra woman (is) a Párasava."

("Sacred Books of the East" Vol. XIV pt. 2 pp. 94-95.)

selves. During the middle Vedic period their influence, as we saw, was indeed very great. But the extravagant pretensions of the Bráhmanic priesthood were, as we also saw, shortly after disputed by the other members of the Aryan community, especially the Kshatriyas. These as well as the Vaisyas had, from the very first, enjoyed many important privileges in common with the Bráhmans, and had served as the lever to Bráhmanical ascendancy; but now they, especially the Vaisyas, gradually became as sharply distinguished from the Bráhmans as they had been from the Súdras. The secularisation of a good portion of the Bráhman community, which commenced with the movement of Rationalism in the later Vedic period still went on. But a limited section of them, having now pretty nearly all their own way, by manipulating the aboriginal forms of faith, and refining them with ideas borrowed from Aryan theology, philosophy and metaphysics, built up a huges uperstructure of idolatry and fetishism—the post-Vedic Hinduism.

The new priesthood.

Two of the most important results which followed the establishment of post-Vedic Hinduism were, first, the formation of a priesthood mainly from amongst the Bráhmans—a priesthood, however, of an entirely different character from that of the Bráhmanic period. Instead of assisting at great sacrifices, they performed the worship of gods, and goddesses in temples, under trees, by the riverside, and so forth. Secondly, the establishment of Hinduism elevated the position of the Súdras still further. There was no longer a religious distinction between them and

the Aryans: all became a confused mass of heterogeneous Hindus.

Condition of the four castes.

A good many of the Bráhmans were gradually compelled to take to occupations other than priestly. It was only a very limited section of them that still continued to perform the great public sacrifices in strictly Aryan principalities. A somewhat larger number of them formed the new priesthood just mentioned. But, by far the greatest majority of them, were anything but priests. In the Manusamhitá we read of many Bráhmans who followed the occupations of the lower classes. There were Bráhmans who earned their living by selling meat, by low traffic, by dancing, by making bows and arrows, by taming elephants, horses or camels, and by tillage. There were Bráhman shepherds, Bráhman oilmen, and Brahman falconers.* The social position of such Brahmans could not have been far superior to that of some of the lower classes. It is declared in the Manusamhitá that "Brahmans who tend herds of cattle, who trade, who practise mechanical arts, who profess dancing and singing, who are hired servants or usurers, let the judge exhort and examine as if they were Súdras."† Similar was the fate of the second or Kshatriya caste; in fact, this caste, as a pure caste is supposed by some to have gradually verged almost on extinction. The Vaisyas, the mass of the original Aryan population, had, of course, from the very first, engaged in all sorts of occupations—they were agriculturists,

* Manu III. 151 &c. † Manu. VIII. 102.

tradesmen, merchants, servants, artisans, and so forth. The gradual filling up of the gap between the Súdras and the higher castes went a very long way to ameliorate the condition of the former; so that even in the dominions of the Aryans themselves, they could no longer have been a class of servants or a "servile" caste. Outside those dominions there were Aryanised or half-Aryanised Súdra kingdoms; and it is inconceivable that Súdra princes should not have employed their kinsmen in the higher grades of the public services, or should have forbidden them to follow any other occupations than those of servants and labourers.

'Mixed' and fallen castes.

With regard to the so-called 'mixed' and 'fallen' castes described in the Manusamhitá, the highest authority on caste, there are 57 of these mentioned, * with professions assigned to about half that number, and pedigrees manufactured for them all. The fact is, all the 'fallen' castes, and many of the 'mixed' castes, are mere names based on ethnological distinctions,

* The following is a list of the 'mixed' castes as given in the "Manusamhitá" X. 8 ff.

Father.	*Mother.*	*Castes formed.*
Brâhman	Vaisya	*Ambashtha*
Do.	Sûdra	Nishâda or Párasava
Kshatriya	Do.	Ugra
Do.	Brâhman	Sûta
Vaisya	Do.	*Vaideha*
Vaisya	Kshatriya	*Mágadha*
Sûdra	Vaisya	Ayogava
Do.	Kshatriya	Kshattri
Do	Brâhman	*Chándála*
Brâhman	Ugra	A'vrita
Do.	*Ambashtha*	*A'bhira*

given to peoples such as the Chinese, the Greeks, the Uriyás, the Persians, the Kaivartas and the Chandálas

Bráhman	A'yogava	Dhigvana
Nishâda	Su'dra	Pukkasa
Su'dra	Nishâda	Kukkutaka
Kshattri	Ugra	Svapâka
Vaidehaka	*Ambashtha*	Vena
First three castes.	by wives of their same caste, but not performing sacred rites.	Vrâtyas.
From Brâhman Vrâtyas	... ...	Bhrijjakantaka *Avantya* Vàtadhâna Pushpadha Saikha
From Kshatriya Vrátyas	... ...	Jhalla *Malla* *Lichchivi* Nata Karana Khasa *Dravida*
From Vaisya Vrâtyas	... ...	Sudhanvan A'chárya Kárusha Vijanman Maitra Sátvata
Dasyu	A'yogava	Sairandhra
Vaideha	Do.	Maitreyaka
Nisháda	A'yogava	Márgava or Dása or *Kaivarta*
Do.	*Vaideha*	Kárávara
Vaidehaka	Kárávara	*Andhra*
Do.	Nisháda	Meda
Chandála	*Vaideha*	Pándusopáka
Nisháda	Do.	A'hindika
Chandála	Pukkasa	Sopáka
Chandála	Nisháda	Antyávasáyin.

Castes which are more or less clearly mere ethnic designations are given in Italics.

The 'fallen' castes mentioned in the Manusamhitá are the Paundrakas (the people of North Bengal), the Odras (Uriyas), the Kambojas (Kabulis), the Yavanas (Greeks), the Sakas (Turanian tribes), the Páradas, the Pahlavas (Persians), the Chínas (Chinese), the Kirátas (certain Himalayan tribes), and the Daradas. For 'Odras' Dr Bühler reads "Kodas" (Kols?) "Sacred Books of the East," Vol XXV. p 412 (foot note).

with whom the Aryans came in contact subsequent to the establishment of the hypothesis that there were but four castes at the creation; and there is abundant confirmatory evidence of this conclusion. The languages of some of the 'mixed' and 'fallen' castes, as, for instance, those of the Dravidians and the Chinese are as different from Sanskrit, the language of the Aryans, as Hebrew is from English. There is, however, no reason, why the loss of purity to an Aryan class should invariably be accompanied by such a radical change of language..

Then, again, there are 27 'mixed' castes, to whom professions are assigned. Of these, half-a-dozen,* that is very nearly one fourth, with of course, six different genealogies are mentioned side by side as subsisting by hunting. These were evidently tribes still unreclaimed from a condition of savagery, unless indeed we conclude that, by an inversion of the natural process of social evolution, so many tribes, following such a primitive occupation did not come into existence in India until the Aryan community had attained a tolerably high stage of civilisation.

We have already seen with what qualifications the popular notion that a particular profession is confined to a particular caste is to be accepted in the case of the four great castes. The characteristic feature of the caste-system was that while the higher

* Namely, 'Ugra' 'Kshattri' 'Pukkasa' 'Andhra' 'Meda,' and 'Sairandhhra,' of Manusamhitá (X. 48—49).

classes could take to the occupations of the lower, the lower were forbidden to take to the pursuits of the higher. With regard to the minor castes, we find that many of them have become extinct, and that the professions of not a few have radically changed. A caste of men, who subsisted according to the Manusamhitá, by killing animals that live in holes, is transformed in later books, into one of encomiasts or bards; another of attendants on women is converted into one of traders; and so on.*

Puránic period: Decay of Hindu civilisation.

The more important changes which have brought the caste-system to its present condition have been chiefly effected within the last 6 or 7 centuries. It was in the twelfth century that the Mahomedans succeeded in conquering and occupying a large portion of India; and it is from that century that the decay of Hindu civilisation began. Every work in the Aryan or Hindu literature that has the stamp of genius or originality, whether on mathematics or medicine, philosophy or philolgy, was written before the close of the 12th century. The Hindus gradually forgot the principles

* 'Su'ta,' who is described as 'horse-trainer,' 'charioteer' in the Manusamhitá becomes 'carpenter' in the Amaracosha, and 'bard' in the Medinicosha. Similarly, 'Ugra' who is said to live by killing animals in Manu becomes a 'bard' or 'encomiast' in the Tantras; 'Magadha,' a 'travelling merchant' in Manu, is described as 'minstrel,' in later works. Another curious instance of radical change is presented by 'Vai lehaka,'' who is spoken of as 'an attendant on women,' in Manu, and as a 'trader,' in more recent books.

of the sciences in which their ancestors had acquired such high distinction; and several of those sciences were reduced to mere arts. Certain sections of the Bráhmans alone preserved the knowledge of the Aryan scriptures, on which the doctrines of Hinduism are professedly based, but which are sealed books to by far the greatest majority of the Hindus.

Increased influence of the Bráhmans.

Blind followers are always the most thoroughgoing and the most zealous. Outside the narrow and sacred precincts of an interested group of Bráhmans, there was no one now to dispute or even question their authority. Reformers like Kabir and Chaitanya rose now and then; but they were few and far between. Whatever the Bráhmans now uttered or wrote was accepted as an infallible truth. If any Bráhman wanted to countenance a particular custom of a particular tribe, he had only to declare that it was sanctioned by the Sástras. But whether he was right or wrong, whether he had misinterpreted or not, very few were in a position to judge. Thus grew up to extravagant dimensions several horrible practices, such as that of "Sati," or self-immolation of widows. Thus sprang up an infinity of caste-rules and regulations, chiefly local, some universal, but mainly something more than merely conventional or customary.

It would appear that even as late as the Buddhist-Hindu period, the Káyasthas, the Vaidyas, the traders and the artisans had not yet been completely differentiated into distinct castes. They were still partly

integral portions of the great Vaisya and, possibly also, in part of the great Kshatriya castes. The industrial castes of the present day such as Teli (oil presser), Kumhár (potter), Kámár (blacksmith), Sutradhár (carpenter), Tánti (weaver), Nápit (barber) and Sonar (goldsmith) do not appear in the lists of castes given by Manu and Yájnavalkya; though we have territorial or tribal castes such as Kaivarta, Chandála, Drávida and Magadha.

The Káyasthas.

The function or occupation castes make their appearance during the period under review. There is no mention of Káyasthas in the Manusamhitá. * They are mentioned by Yájnavalkya and Vishnu but in a way such as to leave little doubt that they had not, at the time when those authors wrote, been crystallised into a distinct caste. Yájnavalkya enjoins the king to protect his subjects from deceivers, thieves, violent men, robbers and others, and especially from Káyasthas. Vyása says, that "a document is said to be attested by the king when it has been prepared in the king's office by the Káyastha appointed by the king and marked by the hand (or signature), of the head of the office".† From these passages, it would appear that towards the close of the Buddhist-Hindu period, the term Káyastha was applied not to a distinct caste but to men who were employed as

* Mention is however, made of Karans who now form a sub-caste of the Káyasthas.

† R. C. Dutt's "Civilisation in Ancient India" (1893), Book V. Ch. VIII.

scribes and tax-gatherers, men who, in all likelihood, belonged partly to the Vaisya and partly to the Kshatriya castes. The modern Vaidya or physician caste does not also appear in the more ancient Samhitás such as those of Manu and Yájnavalkya. Physicians are mentioned in those books but nowhere as a distinct caste, unless the modern Vaidyas are to be identified with the Ambashthas of the Manusamhita, an identification for which, however, there is not sufficient warranty. * Manu mentions physicians in the same category as meat-sellers and liquor-vendors, and Yájnavalkya classes them with thieves, prostitutes and others, whose food can not be taken.

The Vaidyas.

The other occupation-castes such as goldsmiths, blacksmiths, &c. were not also in existence during the last period ; various trades and professions are of course mentioned in the Manu, Yájnavalkya and other older Samhitas, but never in such a way as to give the idea that they formed well defined castes.

Other occupation castes.

How, then, have the numerous function-castes of the present day appeared ? We have seen that during the latter portion of the Vedic period, the Bráhmans the Kshatriyas and the Vaisyas, gradually separated out of the *Vis* the original Aryan community, on the principle of functional division.

Origin of the function-castes.

* Col. Wilford (Asiatic Researches, Vol. viii, 338) suggested the identification of the "Ambashthas" of the Manusamhitá with the Ambastæ of Arrian.

They were strictly speaking sub-castes of the great Aryan caste of the Rigvedic period. They enjoyed many privileges in common as distinguished from the Súdras, the second great caste of that period. The Vaisyas and to a smaller extent, the Kshatriyas pursued diverse occupations as scribes, physicians, traders, artisans and hu sbandmen. In time, special occupations being followed by particular families for generations, as they always would more or less be in a comparatively non-industrial society like that of the Hindus, there arose special occupation-castes. The principle of imitation must have had some influence on the formation of these castes. The fact of the original functional differentiation of the higher castes (Bráhmans, Kshatriyas and Vaisyas) must have been traditionally handed down from generation to generation. What the higher castes had done to preserve their purity was done by the lower for the same purpose.

Various function-castes the result of the disintegration of the Vaisya and partly of the Kshatriya castes.

It is noteworthy in this connection that with the appearance of the profession-castes of the period under review, the Vaisyas and the Kshatriyas to some extent disappear.* Just as on the formation of the function-castes in the later Vedic period, the Bráhmans, the Kshatriyas, and the Vaisyas—their

*With regard to the Kshatriyas the author of the *Ain-i-Akbari* says:—
"There are now upwards of 500 different tribes of Kshatriyas, 52 of whom are in esteem, and 12 are better than the rest. But at present there are scarcely any Kshatriyas to be found, excepting a few, who *do not follow the profession of arms.*" (The italics are mine).

common name, that of the A'rya, disappeared, so on the differentiation of the Káyasthas, the Vaidyas, the Kámárs the Kumárs &c., out of the Vaisyas (and partly also, I think of the Kshatriyas) their common designations also nearly disappeared; only a few, such as the Veniyás and the Káyasthas preserved the tradition of their once having been members of the great Kshatriya or Vaisya groups. †

Some of the castes which resulted from the disintegration of the Vaisya caste tended, as we have seen already to be merged in the Súdra class. In fact, with regard to many members of the socalled Súdra castes such as Barái (carpenter), Kámár (blacksmith), Teli (oil pressers) &c., it is difficult to tell whether they belong to the Súdra or the Vaisya class. The Vaidyas, the Veniyás and the Káyasthas are probably the only indubitable representatives of the great Vaisya class at the present day.

Increase of the Su'dra castes.

Throughout the periods of which we have been treating the Súdras increased in number such as no other caste increased, because every new tribe that came within the pale of Hinduism was classed with them.

This is with regard to the "Military" caste. As for the "Mercantile" caste, he says, "that there is a branch of this, the Benya caste, of which there are 84 subdivisions, among whom are mendicants, men of learning, artists, magicians, handicrafts, and such expert jugglers, that their tricks pass for miracles with the vulgar and impose even upon those who are wiser." *Ain-i-Akberi* (Gladwin's translation, 1800) Vol. II pp. 377.—378.

† One of the traditions of the Káyasthas ascribes to them Kshatriya ancestry. In the *Káyasthakáriká*, a work issued by the Káyastha-kula-samrakshini Sabhá, the Kshatriya ancestry of the Káyasthas is maintained.

This process of increase is still exemplified in the cases of many aboriginal tribes. In Chhattisgar, in the Central Provinces, for instance, the Gonds (an unmistakably Dravidian tribe) who are settled in the plains are classed among low-caste Súdras. They have forgotten their own language and are often ashamed to own affinity with their brethren of the hills whom they hold in undisguised contempt. Like their Hindu neighbours, they eschew beef and pork. Some of them worship Hindu gods, such as Mahámái and Mahádeo, and entertain Bráhman priests. In a few cases, the Gond aspirants after Hindu distinction have risen higher than the Súdra caste. By their wealth and influence, they have got admission into the Kshatriya caste. But their number is extremely small. The farther one goes away from the plains the more are the Gonds found to be unaffected by Hindu influence and to approximate to the primitive type. The hill Gonds never have anything to do with Hindu gods or Bráhman priests. *

The Bengal castes.

The principal castes of Bengal with their numerical strength according to the Census of 1891 may be arranged as follows:—

(A) The Aryans.

1. *Bráhman.*				
(i) Bráhman proper *	...	..	...	2,801,118
(ii) Bábhan	...	...	...	1,222,674
(iii) Bhát	...	...	...	54,499
				4,078,291

* P. N. Bose, "Chattisgar; notes on its tribes, castes and sects," Journal Asiatic Society of Bengal Vol. LLX pt. 1, pp. 269 &c.

2. *Kshatriya.*

Rájput	1,509,354

3. *Vaisya* and pártly also *Kshatriya* (?)

Vaidya	80,273
Veniyá	826,992
Káyastha	1,466,748
(i) Karana *	130,220
	2,504,233

(B) Doubtfully Vaisya, or Sudra, or Mixed.

Barái ...	466,582	(Includes Sutradhár)
Bárui ...	255,368	(Do Támbuli)
Chásá ...	670,757	
Gareri ..	106,424	
Goálá and A'hir *	4,266,075	
Káhár ...	621,176	
Kámár ...	739,728	(Includes Lohár)
Kundu ...	520,409	
Kánsári ...	86,113	
Kumhár ...	746,084	
Moirá ...	419,800	(Includes Halwai)
Máli ...	151,962	
Nápit ...	956,156	(Includes Hajam)
Sadgop ...	571,335	
Sonár ...	273,293	
Tánti ...	801,576	
Teli ...	1,523,123	(Includes Kalu)
	13,175,961	

(C) Non-Aryan or **Sudra.**

Chámár ...	1,497,267	(Includes Muchi)
Dhopá ...	573,463	
Hári ...	465,294	
Jaliya * ...	396,559	
Jugi ...	406,473	
Kapáli ...	134,002	
Kewat ...	358,435	
Malla * ...	382,315	
Nuneya ...	318,441	
Pási ...	147,651	
Su'dra ..	234,659	
Sunri ...	825,264	(Includes Kalwar)
	5,739,823	

Bágdi	...	804,378
Bauri	...	550,897
Dhanuk	...	576,156
Doni	...	453,359
Dosadh	...	1,193,878
Gangauta	...	131,933
Kaibarta *	...	2,231,500
Kandra	...	140,950
Khandait	...	671,272
Koiri	...	1,195,186
Kurmi	...	1,312,628
Mal	...	97,774
Musahar	...	563,532
Bhar	...	45,427
Bind	...	136,336
Chaim	...	116,068
Chandál *	...	1,768,119
Gouri	...	201,460
Kochh	...	1,983,177
Pad	...	418,587
Yiyar	...	193,531
		14,786,148

Caste partly ethnic and partly functional in origin.

The facts collated above clearly show that the caste-system of India is partly of ethnic and partly of functional origin. During the Rigvedic period, it was entirely of an ethnic character. Since then the number of Súdra castes has increased chiefly by ethnic accretions. Nearly all the undoubted or pure Súdra castes of Bengal at the present day are Hinduised aboriginal tribes. The Dosadh, the Bágdi, the Kaibarta, the Kochh, and the Chandál, for instance, are such tribes. Their cast of feature, their traditions, their geographical distribution chiefly confined as they are to particular tracts of Bengal, prove this. Some

* Castes which also appear in the list of the Manusamhitá. It is observable, that only seven castes are common to the two lists *Vide ante* Vol. II. p 15. A'hir is a corruption of 'A'bhira' The identification of "Jaliyá" with Manu's "Jhalla" is doubtful.

of them may have had a slight infusion of Aryan blood, but that they are dominantly non-Aryan there can not be the shadow of a doubt. Some of the castes, however, are what may be called composite castes, that is to say, they include amongst them sub-castes some of which are as markedly Aryan as others are non-Aryan. The Goálá or A'hir is an instance of this kind of caste.*

Composite castes.

With regard to the functional castes it should be observed, that but few of them, with the exception probably of some artisan castes, have long maintained their

Functional castes, functional in a limited sense.

* "The large functional group known by the name Goala seems to have been recruited not merely by the diffusion along the Ganges valley of the semi-Aryan Goalas of the North-Western provinces, but also by the inclusion in the caste of pastoral tribes who were not Aryan at all. These of course would form distinct sub-castes, and would not be admitted to the *Jus Connubi* with the original nucleus of the caste. The great differences of make and feature which may be observed among Goalas seem to bear out this view, and to show that whatever may have been the original constitution of the caste, it now comprises several heterogenous elements. Thus even in a district so far from the original home of the caste as Singbhum, we find Col. Dalton remarking that the features of the Mathurabasi Goalas are high, sharp and delicate, and they are of a light brown complexion. Those of Magadha sub-caste, on the other hand are undefined and coarse. They are dark-complexioned and have large hands and feet. Seeing the latter standing in a group with some Singbhum Kols there is no distinguishing one from the other. There has doubtless been much mixture of blood. These remarks illustrate both the processes to which the growth of the caste is due. They show how representatives of the original type have spead to districts very remote from their original centre, and how at the same time people of alien race, who followed pastoral occupations, have become attached to the caste and are recognised by a sort of fiction as having belonged to it all along." Risley, "Tribes and castes of Bengal" Vol. I. p.p. 282-3.

functional character. The Bráhmans, for instance, as we have already seen, though in their origin a "priestly" caste soon ceased to be such. * In comparatively non-industrial societies where division of labour has not been carried to any considerable extent, professions have a natural tendency to become hereditary. The son enjoys exceptional opportunities of qualifying himself for the occupation of his father, and the father could not leave his son a more valuable legacy than the prestige of his name. It is not unusual to find in outlying villages and towns of India, certain trades and professions pursued by particular families for many generations together. But, this is more or less the case everywhere, where demand is limited, and where, therefore, competition for supply is also limited. In larger towns and cities, however, it is by no means exceptional to find the members of

* The author of the *Ain-i-Akbari*—gives 10 subdivisions of the Bráhman caste :—

1st—Comprises those who give charity, but do not receive it; learn but do not teach, &c.

2nd—Those who receive charity and teach, &c.

3rd—Perform priestly function for themselves as well as for others. They learn as well as teach, bear injuries with patience, observe temperance of every kind, &c.

4th—Those who are princes, &c.

5th—Merchants, tradesmen, cultivators, &c

6th—Those who do whatever appears advantageous to them.

7th—Mendicants who receive alms any one.

8th—Those who are bound by no rules, and like brutes do not know good from evil.

9th—Infidels.

10th—Vile wretches (*Chandálas.*)

Op. cit (Gladwin's translation) Vol., II pp. 375-376.

one and the same caste engaged in the most divergent occupations. Nothing is more common, for instance, than to find Bráhmans, who are supposed to constitute the "priestly" caste, serving as cooks, guards, &c., to lower caste people, even to Súdras, the so-called "servile" caste. By far the greatest majority of the "priests" are unquestionably cultivators, and various kinds of servants; and it is only a small fraction of them that perform the priestly function. There are not many royal families that can lay claim to Kshatriya descent. The founders of the well-known dynasties of Scindia, Holkar, Guickwar, &c., were adventurers, sprung from the lower subdivisions of the Súdra caste.

Summary of results.

The conclusions to which the facts stated above lead us may be briefly stated as follows:—

I. During the Rigvedic period there were two great ethnic castes (Sanscrit *Varnas*). the fair, A'rya, and the dark, Dása (non-Aryan).

II. Shortly after the Rigvedic period two great occupation or functional castes, the Bráhman and the Kshatriya, were differentiated out of the first (Aryan) class. The remaining members of this class, forming the mass of the Aryan people or the *vis*, were denominated the Vaisya caste.

III. Since the Rigvedic period, the Súdra caste has been increasing—

(*a*) By fresh accessions of various Hinduised aboriginal or non-Aryan tribes.

(*b*) By the gradual confusion of the lower orders of the Vaisya with the higher orders of the Súdra caste.

IV. The disintegration of the great Vaisya and partly also of the Kshatriya caste into various smaller castes chiefly of a functional character was effected during the early portion of the Puránic period. This conclusion is based upon the following considerations :—

(*a*) The disappearance of the great Vaisya caste with the appearance of the functional castes of the Puránic Period. It is inconceivable that a caste which must have been the largest during the Vedic and the Buddhist-Hindu periods, should have become extinct in the Puránic period without leaving any progenitors behind.

(*b*) The legendary recollection by several of the castes, such as the Beniyá and the Káyastha of their Vaisya or Kshatriya origin.

(*c*) The coincidence in the occupations of many of the function-castes in the later periods with those assigned for the Vaisya caste in the works of the earlier periods.

English influence on caste; indirect,

The English influence on caste has been chiefly exerted indirectly through the numerous schools where English is taught, through railways and steamers and offices and factories. The slow and imperceptible, but continuous and incess-

ant, denudation effected by such agencies as rain-water, wind, and frost destroys and levels down land more efficiently than violent but occasional floods and storms. And the slow but continuous operation of the educational agencies set to work by the British in India has done more to weaken the foundation of caste within the last half-century than the occasional outbursts of reformative energy within the last twenty-five centuries.

but great.

We have now in India many medical schools teaching thousands of pupils on European methods. Men of all castes from the highest to the lowest are to be found among them; and dead bodies are annually dissected by the thousand. The question that the Hindu would lose his caste by touching a dead body never arises now-a-days. But it greatly perplexed the government and the public before the first Medical College of India, that of Calcutta, was founded in 1835. The Hindus of the time had forgotten the principles of their sciences. They knew not, that their ancestors had made discoveries in medical science which still extort admiration from European doctors. They knew not that in the work of Susruta, one of their greatest writers on medicine, dissection of the human subject is carefully enjoined for the teaching of anatomy. A committee was appointed by Lord William Bentinck in 1833 to consider the subject of medical education on modern methods. The commission took evidence for one year. They visited Dr. Duff's School and the

Illustrations of this influence; caste and medical instruction.

following interesting incident is related by Dr. Smith in his "Life of Alexander Duff"*:—

"Timidly and after a roundabout fashion did the Apothecary General [President of the committee] approach the dreaded subject of dissection, for the first thing he learned and indeed saw was that the lads were chiefly Brahmans. He thus began, 'you have got many sacred books, have you not?' 'Oh yes' was the reply 'we have many shastras believed to be of divine authority'......'Have you not also medical shastras which profess to teach everything connected with the healing art?' 'Oh yes' they said 'but they are in the keeping of Vaidya caste; none of us belong to that caste, so that we do not know much about them.' 'Do your doctors learn or practice what we call anatomy?'...'We have heard them say that anatomy is taught in the shastras, but it can not be like your anatomy.' 'Why not?' 'Because respectable Hindus are forbidden by imperative rules of caste to touch a dead body for any purpose whatever; so that from examination of the dead body our doctors can learn nothing about the real structure of the human body.' 'Whence then have they got the anatomy which, you say, is taught in the shastras?' 'They have got it out of their own brains though the belief is that this strange shaster anatomy must be true or correct, it being revealed by the Gods; but we now look upon this as nonsense.' 'What then if the Government should propose to establish a medical College for Hindus under European doctors like the Medical College in Europe? Would you approve or disapprove of such a measure, or how would it be viewed by the natives generally?' 'We certainly who have been taught European knowledge through the medium of English would cordially approve but our ignorant orthodox countrymen would as certainly disapprove.' The Apothecary General was greatly surprised when the English educated youths of the school expressed their readiness to join the Medical College if Government would start it. 'What' he exclaimed 'would you actually be prepared to touch a dead body for the study of anatomy?' 'Most certainly' rejoined the head youth of the class, who was a Bráhman 'I for one, would have no scruples in the matter. It is all prejudice, old stupid prejudice of caste, of which I at least have got rid.'

* *Op cit.* Vol. I. pp. 214—216.

The first dissection.

The orthodox Hindu community though they could not find any thing in their Sástras which forbade dissection for anatomical purposes protested against the establishment of a Medical College which would lead to a breach of caste-rules. The protest was disregarded; the Medical College of Calcutta was opened on the 1st June, 1835. The first demonstration by dissection caused great anxiety. The College gates were closed to prevent forcible interruption of that awful act; and when the first student following his professor plunged his knife into the subject for dissection the action was looked upon as a remarkable instance of moral courage.

Hinduism has outlived the removal of many caste-restrictions.

The cry of the orthodox Hindu society has ever been "Hinduism in danger." When in 1831, a few boys of the Hindu College attended a lecture delivered by a missionary on the moral qualifications necessary for investigating truth,the whole city was in an uproar. The College was closed the next day. A notice was put up threatening with expulsion students who should attend "Political and religious discussions." When it was decided to stop the practice of Satí. Hinduism was held to be in danger. When English educated youths first began to eat forbidden food, the same cry was raised. But indulgence in forbidden food no longer exposes one to excommunication.* Hinduism is based on too firm a foundation to be easily shaken;

* See *ante* Book I, Ch. III., also Book II., Ch. IV.

the removal of the thick jungle-growth of superstition and prejudice will ensure rather than weaken its existence.

Higher education in pre-British times was practically confined to the Bráhman. It is now open to all. The son of the despised shoe-maker and the son of the venerated priest have to sit on the same seats and receive the same instruction. The prizes inside schools and the prizes outside schools are open to all, irrespective of caste. The fact is, under existing conditions, the maintenance of strict orthodoxy is extremely difficult, we may almost say, well nigh impossible. In the school room, in the railway compartment and on board the steamer, caste-rules can not be rigorously observed, notwithsanding great privations which the Hindus often undergo to follow them. Before the water-works of Calcutta had been started, the drinking of the pipe-water was contemplated with horror by the orthodox Hindu community. Yet, how many members of that community get their drinking water from the Ganges? That the drinking of pipe-water, of bottled sodawater or lemonade, or of medicatad water from European dispensaries is against strict rules of caste does not enter into the head of 99 out of 100 Hindus at least in Bengal. How many before regaling themselves with sweets sold in our shops stop to enquire whether they are made of refined or unrefined sugar, and how the sugar has been refined? How many before using soap enquire whether fat or oil has entered into its composition?

Vedas taught and interpreted by Su'dras and Mlechhas.

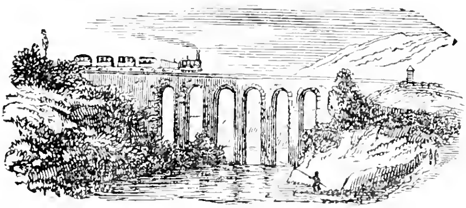
The Vedas are the most sacred of the sacred books of the Hindus. The right of reading them at first reserved to the Aryan portion of the Hindu community gradually became restricted to the Bráhmans. Fifty years ago such an idea as a Súdra or a Mlechha reading the Vedas or even hearing them read—let alone commenting on or interpreting them—would have excited horror and indignation in the Hindu community. But now the Vedas are read, interpreted, and translated by Súdras and Mlechhas, who are not only tolerated but even helped by Bráhman scholars. The public recognizance of this heterodox practice has gone so far as to lead to the inclusion of the Veda in the course of studies in a University.

Intermarriage.

According to the present caste-customs intermarriage not only among different castes, but sometimes even among subdivisions of castes is forbidden. The Mudeliars of Madras are divided into as many as fifty sections, not one of which can intermarry with another. The case is somewhat similar among the Naidus, Pillais, and Reddis. In order to remove the evils arising from such restriction of marriage within narrow limits the Sixth Social Conference resolved 'that every endeavour should be made to promote re-union among subdivisions of castes, and inter-marriage among those sections which can freely dine together.'*

* "Report of the Sixth National Social Conference" p. 20.

When carried into practice this would be a step, though a very small one, towards intercaste marriage. English influence has helped to remove or relax caste-restrictions about food, drink, and sea-voyage; but the restrictions about marriage have scarcely been touched as yet. There are even Bráhmas and Christians who look upon intercaste marriage with disfavour.



CHAPTER II.

MARRIAGE CUSTOMS.

Widow-marriage.

There is sufficient evidence to show that widow-marriage was allowed, and that the rite of Sati was unknown in the Rigvedic period. "Rise up woman"—so runs a text of the Rig-veda*—"thou art lying by one whose life is gone, come to the world of the living, away from thy husband, and become the wife of him who holds thy hand, and is willing to marry thee." In later times, Arjuna married a widow and the issue of this union, Irávân, was considered as his legitimate son. Restrictions however were gradually placed on the marriage of widows. "If a

Earliest references to it.

* R. V. X, 18, 8.

damsel at the death of her husband" says Vasistha "had been merely wedded by (the recitation of) sacred texts, and if the marriage had not been consummated, she may be married again."*

By the time of the Manusamhitá widow-marriage had fallen into disrepute. The duties of widows are thus prescribed in that work ; "Let her emaciate her body by living voluntarily on pure flowers, roots, and fruits, but let her not, when her lord is deceased, even pronounce the name of another man, let her continue till death forgiving all injuries, performing harsh duties, avoiding every sensual pleasure, and cheerfully practising the incomparable rules of virtue which have been followed by such women as were devoted to one only husband."† There are however, passages which show that widow-marriages still took place ‡ and it is probably to discourage them that Manu declared himself so strongly in the passages just cited. Like Vasishtha, however, he permits a virgin widow to remarry. "She is worthy," says Manu, "to perform with her second husband the nuptial ceremony."§

Falls into disrepute.

In the earlier centuries of the Christian Era till probably the 8th century, widow marriage though in

* Vasishtha samhitá "Sacred books of the East", Vol. XIV p. 92.

† Manu V, 157, 158.

‡ In one place we are told of husbands of remarried women (III,166) and sons of remarried widows are not unoften alluded to (III. 155, 181 ; IX, 8, 175, 176).

§ Manu, IX, 176,

disfavour, was still not rare among the higher castes. Parásara, one of our latest legal athorities, distinctly sanctions it, "if the husband of a woman be impotent or be lost or dead, or if he should be excommunicated or became an ascetic." But by the eleventh century, widow marriage among the higher castes would appear to have become altogether obsolete. "If a wife loses her husband by death," says Alberuni "she cannot marry another man. She has only to choose between two things, either to remain a widow as long as she lives or to burn herself."* Widow-marriage has been prohibited in Hindu society ever since the time of Alberuni. It must be clearly understood, however that the prohibition refers chiefly to the higher classes. Widow-marriage has always been more or less prevalent among the lower classes.

Widow-marriage prohibited.

As will be seen from the following table, nineteen per cent of the total Hindu female community of India are widows. The percentage is double that of England but on the other hand, only 1·5 percent of Hindu women of the age of twenty and upwards are unmarried, as against 25 per cent in England ; so that "if marriage is a good thing for woman as is alleged on all hands" observes a writer in the *Nineteenth Century* "the much more married condition of the Indian population is some set off as against the defects of their system of marriage."†

* Alberuni's "India," [Translation by E. C. Sachau], Vol II. p. 155.
† J. D. Rees, "Nineteenth Century", Oct. 1890.

The civil condition of Hindu females according to the Census of 1891 :—

	Unmarried	Married	Widowed
Under 5 years. ..	13,627,498	222,111	10,165
Age 5 to 9 ...	10,834,298	1,853,039	51,876
,, 10 to 14 ...	3,855,893	4,724,372	140,734
,, 15 to 19 ...	728,880	6,302,998	280,942
,, 20 to 24 ...	203,216	7,631,838	545,405
,, 25 to 29 ...	121,134	7,403,094	903,231
,, 30 to 34 ...	99,171	6,431,420	1,493,907
,, 35 to 39 ...	56,434	3,793,858	1,364,732
,, 40 to 44 ...	58,012	3,482,418	2,491,052
,, 45 to 49 ...	26,067	1,531,569	1,488,208
,, 50 to 54 ...	32,517	1,407,544	2,709,916
,, 55 to 59 ...	12,377	492,664	1,052,083
,, 60 & over ...	36,238	737,507	4,782,163
,, not stated ...	37,066	38,833	8,717
	29,728,801	46,053,265	17,323,131

Treatment of widows in the North-west and Bombay ;

The hardships to which a high-caste Hindu widow is subjected vary locally. They appear to be most severe in the North-West and the Bombay Presidency. A Bombay gentleman (Kashi Nath Govind Nath) thus described her sufferings at the Social Conference of 1892 :

"He [the barber] shaves her. She weeps, she shrieks but all is in vain ! For a year more, for shame's sake she cannot venture out of the house, she is looked upon as the most unfortunate wretch that has incurred God's displeasure. Her sight is ominous. If she happens to come in front of you when you are going out, you consider that an ill luck, and pause a few minutes till the pestilence disapppears. Then the only ambition open to her is to go to Benares and die or drown herself in the sacred Ganges. I think self-immolation, which Lord

W. Bentinck stopped with a mighty hand. was a pleasure when compared to her life of everlasting punishment."

in Bengal ;

In Bengal, the widow is treated with greater consideration. "English people" says the Rev. Lal Behari Dey "have somehow or other got the idea that a Hindu widow receives harsh and cruel treatment from the relations of her husband. This is not true. There are no doubt, exceptional cases, but as a general rule, Hindu widows are not only not ill-treated, but they meet with a vast deal of sympathy. Old widows in a Bengali Hindu family, are often the guides and counsellors of those who style themselves the lords of creation......Old widows, provided they have intelligence and good character assert, on account of their experience in life, their superiority over men younger than they. As to the privations of life a little too much is made of them. Besides the one supreme privation of having the fountain of their affection sealed up, the others, of which foreign writers make so much are not worth speaking about. The most considerable of these minor privations is that only one meal is permitted them in twenty-four hours. But this restraint will cease to be regarded as a privation when it is considered that widow's meal is usually larger in quantity and heavier in weight than that of a married woman, that the meal is taken in the afternoon, not many hours before sleep; that most widows are sleek and stout, and that many of the strong and able-bodied peasants of the North-Western Provinces, and the Hindu sepoys of

the Bengal army, take only one meal in twenty-four hours."*

In Madras also widows do not appear to be particularly ill treated. Sir Ramasawmy Mudeliar says, "that as far as his experience goes the Hindu widow is generally treated very kindly, her unfortunate condition creating a feeling of sympathy and kindness." Raja Sir T. Mádhava Row says, "that the Hindu widow is not treated badly, but kindly and considerately, that she is not the drudge and the slave of the other members of the family as is sometimes represented." Mr. J. D. Rees concludes his article on "Meddling with Hindu marriage" with the following opinion of a cultured Madrasi gentleman, who, once a lawyer in good practice, has retired from business, and "occupies himself in reading, thinking, and writing:"

in Madras.

"That the Hindu widow is generally badly or cruelly treated I deny. Hindus, being mild and merciful from the accumulated habitudes of countless ages, are acknowledged to be most indulgent even to their prisoners. Who, then, can charge them with cruelty to widows, who are naturally among the most deserving of their relatives? 'Strike not with a flower' is the Hindu's rule of conduct in the treatment of the females in his power. Where authority is exercised by those who are or ought to be admitted to know and love ourselves, it is sacrilege to complain of 'tyranny', for the authority in such cases bears the seal of God Himself. Widows are generally provided for out of their husband's or

* "Govinda Samanta" Vol. I. (1874) p. 195.

children's property. If they have children, their children cherish them ; if they have not, such unburdened ladies, being 'nuns by the choice of God,' are often prized as the guardian angels of our households, for they ever give far more than they can possibly take in the shape of voluntary temporal service and holy religious example. Far from being oppressed by their brothers, brothers-in-law, uncles, or other relatives, into whose houses they are eagerly received, they are often even permitted to monopolise all authority therein."*

Widow-remarriage ; Vidyáságara

The first important step towards the removal of the restrictions against widow-marriage was the publication in 1855 by the late Isvara Chandra Vidyáságara of his work on Widow-marriage in Bengali. In it he showed by copious citations from the sacred books of the Hindus, that widow-marriage had never been authoritatively prohibited, but, on the contrary, it was sanctioned by even such comparatively recent law-givers as Parásara. The book created a sensation in Hindu society such as no other book had ever before done in Bengal. The first edition consisting of two thousand copies was sold off in less than a week. A second edition of three thousand copies and a third one of ten thousand copies were also soon exhausted.† Considering how limited the reading

* The *Nineteenth Century*, Oct. 1890.

† Life of Iswar Chandra Vidyáságar by Sambhu Chandra Vidyáratna p. 114.

public of Bengal must have been forty years ago, such sales indicate the intensity of the interest which was felt in the subject. The book evoked a considerable amount of hostile criticism which was ably answered by Vidyáságara.

Widow-marriage legalised.

Vidyáságara's efforts at reformation did not stop with exegetic disquisitions. Under his lead a memorial signed by two thousand Hindus was presented to government for the recognition of widow-marriages, and an Act legalising such marriages, was passed on the 13th July, 1856.

In the case of the Satí rite, many Europeans like the missionary Carey had repeatedly moved Government against it, and the rite was finally abolished at the initiation of the Government. The widow-marriage movement, however, was entirely an indigenous one. It had and still has, the sympathy of a large number of the educated Hindus. Yet such is the force of custom, that within the thirty-seven years that have elapsed since the passing of the Widow-marriage Act, it is doubtful if more than a hundred widow-marriages in accordance with that Act have taken place, and not a few of them were due to the personal exertions of Vidyáságara. He became heavily involved in debt on account of the expenses connected with them, but refused assistance from others. The first widow-marriage was celebrated by him on the 7th December, 1856. Three more marriages followed in quick succession. Vidyáságar set an example in his own family by marrying his son to a widow. But Hindu society refused and still refuses to recognise widow-marriages: all who contract them are excommunicated.

There are however, indications of the adoption of more liberal views by the Hindu society in the near future. In Bombay quite recently Dr. Bhandarkar gave his widowed daughter in marriage. It is reported that the Sankará-chárya of the Sáraswata Bráhmans has excommunicated him, his daughter, and her husband. But the decision has not been accepted by a considerable portion of the community, and it has not yet been publicly announced at a caste meeting. *

Later agitation.

In 1884, a Parsi gentleman, Mr. Behramji M. Málábári circulated a note on enforced widowhood, in which he suggested legislative action for its suppression. The Government of India came to the conclusion, that the "Legislature should keep within its natural boundaries, and should not, by overstepping those boundaries, place itself in direct antagonism to social opinion." Nevertheless, the Government thought that there would be no serious objection to amend the Widow Marriage Act of 1856 "as to the forfeiture of property of a widow on re-marriage" and to supply machinery "by which a Hindu widow, who fails to obtain the consent of her caste fellows to her re-marriage, may nevertheless marry without renouncing her religion." "But" added the Government resolution "although, there is much to be said in favor of each of these suggestions, the Governor General in Council, as at present advised would prefer not to interfere, even to the limited extent proposed, by legislative action until

* Report of the Sixth National Social Conference. Appendix A.

sufficient proof is forthcoming that legislation is required to meet a serious practical evil, and that such legislation has been asked for by a section, important in influence or number, of the Hindu community itself."

Widow marriage still in disfavour.

Widow marriage is greatly encouraged by the Bráhmás In 1882, out of thirteen Bráhma marriages, no less than five were re marriages. Widow-marriage, however, appears still to be unpopular even among the educated community. Whereas twelve hundred and eighty two members of the Puna Social Reform Association pledged themselves to discourage child-marriage, but few have pledged to promote the marriage even of child widows.* Widow marriage is forbidden in the A'rya Samáj, though a widower and a widow are allowed to live together by mutual consent until the birth of two, or at the most four children to be divided among them. At the National Social Conference held at Bombay in October, 1890, "of ten speakers five were against the very lame conclusion arrived at, to the effect that the time had arrived for an enquiry into the working of the Widow-Marriage Act, with a view to suggest further improvements." † The Sixth Social Conference could only resolve "that the disfigurement of child-widows, before they attain the age of 18 and even after that age, without the consent of the widow recorded in writing before a Punch and a Magistrate be discouraged, and caste organisations

* Report of the Sixth National Social Conference Appendix, p 13.
† *Nineteenth Century*, Oct. 1890 p. 671.

be formed to arrange for social penalties to be inflicted on those who aid in disfiguring child widows without their consent."

The Seventh Social Conference, however, pronounced more decidedly in favour of the re-marriage at least of child-widows. The Conference noted with great satisfaction that during the past year more than eleven re-marriages took place in the Punjab, Madras and Bombay, and recommended that all facilities should be provided by the several local associations to encourage the re-marriage of child-widows.

Homes for widows.

Several Homes have been lately started for Hindu Widows. One of these founded by Punditá Ramá Bái in 1889 is called Sáradá Sadana, or Home for High Caste Child-widows. In March 1891, there were in it thirty child-widows of whom the greater number had been rescued from misery and suffering. Another Home of the kind was founded about the same time at Baránagar near Calcutta by Sasipada Bannerji. The following is an account of five years' progress of this Home: *

"The first Hindu widow admitted in the Baranagar Institution was on the 2nd February 1888, and in these five years, though the work has not made very rapid progress, it is no small satisfaction to see that the influence of the novel experiment has been felt far and wide in the country. Girls have come to the Home from Calcutta, 24 Pergunnahs, Hooghly, Burdwan, Pubna, Faridpur, Barisal, Mymensingh, Sylhet, &c., and every year the number of Hindu widows is increasing. That the influence (however small) of the new current is not merely on the

* *The Indian Magazine,* September 1892.

surface of Hindu society may be inferred from the fact that married Hindu ladies from the Zenana and of position now and then pay private visits to the Home, with a view to see for themselves how it was managed, and on one occasion they were so pleased with it that they sent some pecuniary help. These little matters show the real current of the movement.

The line of work and the teaching are also approved by the Government Inspecting Officers, who have in their several visits expressed their satisfaction with the progress shown by the girls. The instruction is not confined to books, but the boarders are taught cooking, sewing and useful household work."

Early marriage,

not very prevalent in Vedic times;

In the Rigvedic Period, girls would appear to have had some voice in the selection of their husbands. In one text of the Rigveda, it is said that many women are attracted by the wealth of those who seek them; "But the woman who is gentle and handsome selects, among many, her own loved one as her husband."* There are also other texts which show that girls were not married at a very tender age. In one passage, Visvávasu, the god of marriage is asked to go to some maiden who has "attained the signs of the age of marriage," "whose person is well developed" and "unite her to a husband."† Even as late as the time of the Manusamhitá, the practice of early marriage does not appear to have been quite established. The marriageable age for men is declared

* Rigveda, X, 27, 12.

† Rigveda, X, 85, 21-22.

to be thirty or at the lowest twenty-four, though that for women is given as twelve or even eight.* It is enjoined, that if an excellent bride-groom presents himself, the daughter may be given in marriage "though she have not attained the proper age."† We are, however, expressly told elsewhere, that "a girl having reached the age of puberty, should wait three years, but at the end of that time she should herself choose a suitable husband If, being not given in marriage, she herself seeks a husband, she incurs no guilt, nor (does) he whom she weds."‡

an established practice about the time of Yájnavalkya.

By the time of Yájnavalkya early marriage for girls had become an established custom. He says, that the guardian of a girl becomes guilty of causing miscarriage if he has not given her away when her menses appear. § Later still Parásara delivered himself on the subject still more strongly: "The mother, the father, and the elder brother of a girl go to hell on seeing her menstruant while yet unmarried. The Bráhman who, perplexed by ignorance, marries such a girl, is the husband of a Súdra woman; no one should speak or eat with him." ||

It should be observed, that Hindu civilisation was still progressive when Manu and Yájnavalkya wrote;

* Manu III, 1-4; IX, 94

† Manu IX, 88.

‡ Manu IX, 90-91.

§ Yájnavalkya, I., 64,

|| Parásara, VII., 6-7 Institutes of Parásara (Bibliotheca Indica), p. 63.

so that the custom of early marriage, was not due to the degeneracy of the Hindus, as is usually supposed. Its origin may be accounted for partly by the sacramental conception of the nuptial tie, * partly by a high (though somewhat exaggerated) regard for female chastity, and partly by the exigencies of the joint family which require a wife to be brought up to suit it. But even as late as the time of Parásara, the evils incidental to child-marriages were to some extent minimised by the provisions for re-marriage of child-widows. There is every reason to believe, that the remarriage at least of child-widows was permitted until the decay of Hindu civilisation which began in the 11th century.

Akbar forbids child-marriage.

Of the Mahomedan emperors, Akbar took some steps for the prevention of early marriages both amongst the Hindus and the Mahomedans. He forbade boys to marry before the age of 16, and girls before 14, "because the offspring

* "The idea of conception and birth as a taint, and the effect of sin in prior life, and the idea that purification is necessary, is the outcome of aspiration for immortality, and of the belief that as long as one's sin remains unexpiated, one is born again in this world. The consequent necessity for the purificatory rite led to the recognition of marriage, which is the only rite prescribed for women as indispensable. This is the conventional religious ground on which marriage became imperative on women belonging to the regenerate classes. The rational ground is also disclosed, though as it were incidentally, by those texts which direct their fathers to give their daughters in marriage before they attain their maturity, lest they may yield to temptation." (Justice Mathuswámy Iyer quoted by Mr. J. D. Rees in the *Nine-teenth Century*, October, 1890).

D

of early marriages is weakly." * But the mention of these orders is of the most casual character, and it is doubtful how far they were obeyed either by the Mahomedans or the Hindus.

Evils of infant marriage;

The evils of infant marriage such as is customary with the higher class Hindus are obvious—physical deterioration especially of the girl mother, birth of sickly and numerous children, too early family-responsibilities on the boy father, often proving detrimental to his prospect in life, domestic infelicity,† and the increase in the number of child-widows. The evils, however, have sometimes been exaggerated. It should be borne in mind, that early marriage in its most obnoxious form is prevalent only amongst the higher caste-Hindus whose position usually enables them to minimise the evils of child marriages, at least to a great extent. It would probably be no exaggeration to say, that in the greater majority of cases they have proved as happy as adult marriages. It is urged

* Elliot's "History of India" Vol VI. p. 69.

† The case of Dádáji *vs.* Rukmábái which created quite a sensation a few years ago well illustrates one of the evils attending child marriage. Such cases, however, are happily rare. Rukmábái was married to Dádáji when she was eleven years of age. Dádáji for sometime remained at the house of his father-in-law, Dr. Sakharam Arjun. who paid for his education After a while, however, he left his studies and returned home to his uncle's where he did nothing to earn a livelihood. After sometime he sent an invitation to Rukmábái to come and live with him. As, however, he had no ostensible means of respectable livelihood, and for other reasons, Rukmábái refused to go to him. The result was, that Dádáji brought a suit for the restitution of conjugal rights. The verdict was ultimately given in favour of Dádáji ("Life and Life-work of Malabari, p. 223").

by the advocates of early marriage, that a child wife suits the conditions of Hindu joint family better than an adult wife on account of the greater pliability and adaptability of the former. In the lower castes, infant marriage is certainly not the rule. As will be seen from the figures extracted from the last Census-Report,* out of 26,659,030 Hindu boys under the age of ten, 700,825 were married and 28, 253 widowed; and out of 26,568,987 girls under the age of ten, 2,075, 150 were married, and 62,041 widowed.† So that only 26 boys out of every thousand, and 76 girls out of every thousand were married before they attained the age of 10. Considering that even in these cases of child marriage, consummation is usually deferred until the attainment of puberty, and in some parts, as in the Panjab, for several years after, the evils of such marriage are in reality, not so great as is supposed by a certain section of social reformers.

* Civil condition of Hindu males (Census of 1891).

	Unmarried.	Married.	Widowed.
Under 5 years	13,123,360	88,327	5,019
age 5 to 9	12,806,592	612,498	23,234
,, 10 to 14	8,817,583	1,992,251	59,152
,, 15 to 19	4,681,205	3,191,106	96,618
,, 20 to 24	2,598,589	5,016,566	180,956
,, 25 to 29	1,398,122	6,774,094	302,574
,, 30 to 34	729,969	7,038,667	420,257
,, 35 to 39	359,750	5,154,615	392,316
,, 40 to 44	282,630	5,463,514	593,415
,, 45 to 49	142,717	2,970 218	427,323
,, 50 to 54	136,582	3,300,763	664,141
,, 55 to 59	60,740	1,265,368	343,589
,, 60 and Over	129,422	3,033,121	1,328,464
,, not stated	48,197	41,274	3,740
	45,315,458	45,942,382	4,840,798

† For the civil condition of Hindu females *vide ante*

Causes of the decrease of child-marriage among the educated community.

Under the influence of the Western environment, child-marriage is gradually becoming less common, at least among the educated community. The struggle for existence is becoming harder every day; and the joint family system which made it lighter is breaking down. Young men, who are gradually being allowed a voice in the matter which concerns them so intimately, are averse to undertake marital duties and responsibilities until they are in a position to discharge them properly. When they do marry,they show a decided preference for grown up girls. Therei s also another cause which operates against child-marriages. Among the higher castes in some parts, it has of late become customary for the bride-groom or his parents to exact as much as possible from the guardians of the bride. The latter, therefore, wait as long as they ever can, trying to get the most eligible match for the lowest consideration. Besides, it is becoming customary with parents to educate their daughters as long as they possibly can, because educational qualifications make them more eligible as brides.

Native Marriage Act.

Marriage among the Bráhmas (except the Á'di Bráhmas,is regulated by the "Native Marriage Act" which was passed in 1872, and which fixes the minimum marriageable age for boys at 18, and for girls 14. The Bill as introduced into the Governor-General's Council by Sir H. S. Maine was intended in substance to be a "Civil Marriage Bill, having

howerer, the peculiarity, that the persons availing themselves of the new power must not be Christians to whom a special system of marriage registration applied), and must expressly object to be married with the rites of any one of the recognised native religions. With religious ceremonial it would not be concerned" It was meant to include such Neo-Hindu as would object to marry according to ordinary Hindu rites. The orthodox Hindu community took alarm. They complained that the proposed law would strike at the foundation of their social organisation, as it would allow a Hindu to marry whomsoever and howsoever he pleased. The opposition was so strong, that the operation of the Bill had to be narrowed to the Bráhmas. The marrying parties were required to formally declare that they "did not profess the Hindu, Mahomedan, Christian, Parsee, Buddhist, Sikh, or Jaina religion." This stopped the opposition of the orthodox Hindus. But there were many Neo-Hindus who objected to the declaration. For, though mostly monotheists and going the full length with the Bráhmas in respect of social reform, they could not, if they sought the protection of the Act, conscientiously make the declaration.

Adult Marriage in the A'rya Samáj.

The members of the A'rya Samáj denounce child-marriage. The prescribed ages for marriage are for men from 25 to 48 and for women from 16 to 25. The following directions about marriage are given in the *Satyartha Prakásh*:—*

* Quoted in a tract on Religious Reform (Madras, 1890).

"The photographs of all pupils in the boys' school who are old enough to be married, are to be sent to and kept by the Principal of the girls' school, and photographs of the marriageable girls to be in possession of the Principal of the boys' school. When either Principal thinks that one of the pupils should be married, let him, or her, choose from among the photos in hand the one, the original of which would seem by appearance best suited for the match. Then let this photograph be sent to the Principal of the other school, accompanied by a description of age, height, character, family property, &c. If both Principals agree that the marriage is desirable, the photograph and description of the young man are presented to the young woman and the photograph of the young woman is presented to the young man. If all is favourable, the parents are to be notified, and the marriage is to take place. The parents may carry on these negociations if they wish to do so."

State interference deprecated.

In 1884, the circulation of a note by a Parsee gentleman, Mr. Behramji M. Malabari, invoking State-aid for the discouragement of child marriage evoked an interesting discussion of the subject. The evils of child marriage were, as they had long been, generally admitted. But State-interference was also as generally deprecated. All the Local Governments expressed themselves against legislative action; and the Government of India in 1886, agreeing with them left the matter "to the improving influences of time, and to the gradual operation of the

mental and moral development of the people by the spread of education."

The Consent Act.

In 1890, the occurrence of a case in Bengal in which too early consummation had led to the death of a girl-wife again led to the discussion of the subject of early marriage by the Indian Press. The Government were strongly urged to take steps for the prevention of cases like that just alluded to; and the Consent Act which raised the age of consummation to 12 was the result.

Early marriage and Reform Associations.

The following resolution passed at the Sixth National Social Conference shows that the educated Hindus are well impressed with the evils of child marriage and that they are endeavoring to remove them: "That in the opinion of the Conference, it is essential that the marriageable age of boys and girls should be raised, and that all castes should fix minima varying from 18 to 21 for boys and 12 to 14 for girls according to their circumstances, or that the final irrevocable marriage rite (*saptapadi* or *phera*) should be postponed till the bride becomes 14 years old". *

* It is worthy of note that the resolution was seconded by an orthodox Hindu unacquainted with English. He said in Hindi:—"The early marriage has ruined our country. Many people think that there is great merit in marrying girls in their infancy. But there is no foundation for it in the Shastras. Damayanti, Sita, Draupadi, Rukmini and others were married at an advanced age. If I had time, I would have shown that marriages at an advanced age are in accordance with the approved texts of the Hindu Shastra."

At Puna, there is an Association called the Social Reform Association which appears to be working more energetically than similar Associations in other parts. Through its exertions, seventeen hundred and thirty-nine persons had pledged themselves to various reforms by 1891. Of these 1258 are Bráhmans, 126 Parbhus, Kayasthas and Kshatriyas, 33 Vaisyas, 59 Marhattas 16 Bráhmas, 6 A´ryas, 10 Sikhs, and 12 Jains; while 88 have described themselves as Hindus without specifying the sub-division, and 131 have not given their castes.

Classifying them according to their occupations, 630 are Government servants, 143 students, 123 Barristers and Pleaders, 119 merchants, contractors or artizans, 21 pensioners, 20 doctors, 9 Professors, 136 Imamdars and land holders, one Chief, 3 Sirdars, 3 Dewans and Karbharies, 4 Judges, including a Covenant Civilian, and 67 Priests. The remaining 460 either belong to other professions in small numbers, or have not specified them.

Nine-hundred and forty-four of the pledgists have agreed not to get their sons married below the age of 16; 244 below that of 18; 175 below that of 20; and 2 have promised to leave it to their sons to marry or not as they please. Nine-hundred and eighty one persons have undertaken not to get their daughters married before the age of 10; 188 before the age of 12; 112 before the age of 14; while one has undertaken to keep his daughter unmarried till the 18th year of her age.*

* Report of the Sixth National Social Conference (1892). Appendix p.p. 11-12.

In enlightened States such as Baroda, Maisur, and Travancore, the cause of social reform is making steady progress. The Maháјan of Baroda, an influential guild of merchants and tradesmen representing about thirty castes, passed the following resolutions in 1892:

(1) "No parent or guardian, shall marry a girl before she completes her 10th year.

Proviso—If a girl is to be married before that age permission of the Mahajan should be previously obtained, through the caste to which belong the parties concerned.

(2) The bride-groom shall be older than the bride, at least he shall not be younger than the bride.

(3) Those who infringe these rules, shall be punished by the caste. If the caste fails to do its duty, or if the decision of the caste is disregarded by the parties concerned, the Mahajan should take notice of them.

(4) The Nagarshet, or the Head of the Mahajan, is authorised to apply to the Government for help, in recovering fines, if the guilty parties refused to pay them."

At a Meeting of the Representative Assembly of Maisur held in 1892, the Dewan announced that the Maisur Durbar proposed to prohibit by legislation the marriages of girls below 8 years, and of men over 50 years with girls below 14.

Polygamy.

Polygamy * does not appear to have been uncommon among the Indo-Aryans of the Rigvedic Period. There are hymns in

* This subject is placed here for convenience of treatment. As it has no intimate connection with religion, its proper place is in the next Book.

the Rigveda in which wives curse their fellow-wives. * But in the later Vedic period monogamy appears to have become the rule. "If he has a wife" says A'pastamba "who is willing and able to perform her share of the religious duties, and who bears sons, he shall not take a second." "He who has unjustly forsaken his wife" says the same auther "shall put on an ass's skin, with the hair turned outside, and beg in seven houses saying, Give alms to him who forsook his wife." † The Manusamhitá allows a second wife only in certain specified cases: "A wife who drinks any spirituous liquors, who acts immorally, who shows hatred *to her lord*, who is incurably diseased, who is mischievous, who wastes his property, may at all times be superseded by another wife; "a barren wife may be superseded by another in the eighth year; she whose children are all dead, in the tenth; she who brings forth *only* daughters, in the eleventh; he, who is accustomed to speak unkindly, with out delay; "but she, who, though afflicted with illness, is beloved and virtuous, must never be disgraced, though she may be superseded by another wife with her own consent." ‡

A Dvija is also allowed to take wives from the classes below him, taking care to settle the precedence, honour, and habitation of these wives according to their castes. But it is the wife from his own caste, that could help

* R. V. X. 145.

† A'pastamba, II. 5. 11, & I 10,28,19. ("Sacred Books of the East" Vol. II. pp.125, 89).

‡ Manu, IX. 80-82.

a Dvija in performing religious ceremonies; and the issues of the inferior wives are styled Apasadah.* Yájnavalkya, a later authority than Manu, also authorises a second wife under eight circumstances only; the vice of drinking spirituous liquors, incurable sickness, deception, barrenness, extravagance, the frequent use of offensive language, producing only female offspring, manifestation of hatred towards her husband.†

Kulinism in Bengal.

Polygamy in its most offensive form prevails at present amongst certain classes of the Bráhmans only in Bengal. Ballála Sen, king of Bengal, who reigned about the close of the eleventh century, conferred the honour of *Kaulinya* on men possessing the following nine qualifications: (1) Good behaviour, (2) Meekness, (3) Learning, (4) Reputation, (5) Performance of pilgrimages, (6) Faith in God (7) Fixed profession, (8) Devotion, (9) Charity.‡ There were at the time of Ballala fifty-six families of Brahmans in Bengal, descendants of five Bráhmans whom his ancestor Ádisur had brought from Kanauj. Only nineteen gentlemen belonging to eight of these families § were found to possess all the qualifications just mentioned.

* Manu III. 12-15, IX. 85 X. 10.

† Quoted by Ram Mohun Roy—"English Works," Vol. I. p 365.

‡ The Sanskrit equivalent of this word, *dána*, is ordinarily explained to mean alliances with, or gift of daughters to, nobles.

§ The best known of the eight families are: Bandyopádhyáya, Chattopádhyáya, Mukhopádhyáya, Gangopádhyáyá and Ghoshála.

They were called Kulíns. Thirty-four of the Bráhman families were found deficient in one qualification only. They were called Srotriyas and ranked just below the Kulíns.

Re-classification of Kulins by Devibar.

In course of time, with the degeneracy of the Hindus which commenced with the establishment of the Mahomedan supremacy in the twelfth century, all the qualifications which constituted a Bráhmán's title to kulinism were lost sight of, and in the sixteenth century, the Kulins were reclassified through the exertions of Devibara Ghatak on the basis of their purity of descent from the original Kulíns.*

* The following incident is said to have led Devibar to undertake the work.

"One day, a Kulin Brahmin, named Jogeshwar Pundit, went to the house of his cousin, Devibara. His aunt only was at home. Jogeshwar made obeisance to her, and enquired about his cousin, who had gone elsewhere. The good woman blessed Jogeshwar, and requested him to take tiffin, telling him that she would prepare food for him. Jogeshwar replied that the family with which she had been connected by marriage was so low that it was a degradation to a Kulin like him to even wash his feet at that house. So saying, he requested his aunt not to prepare any food for him, as he would be polluted by partaking of the food cooked by her. He could, however, cook the food himself, but, by so doing, he would show disrespect to her. The only course left for him was to go away without taking his meal. So saying, he left his cousin Devibara's house. His aunt felt much aggrieved. She considered herself insulted by Jogeshwar, and she remained in a dejected mood. After a short time Devibara returned home. Seeing his mother depressed, he enquired of her the cause. She then narrated to her son all that had transpired. On hearing this Devibara became greatly incensed, and resolved to injure not only his cousin Jogeshur, but the whole class of Kulins."—*Indian Magazine and Review*, October, 1892.

Devibar travelled about the country taking notes of the family connections of the Kulíns. He then convened a meeting of *ghataks* (match-makers) and at his suggestion the Kulíns were reclassified according to purity of descent. The other qualifications for Kaulinya such as learning and piety, were at the time possessed but by few; and there was no tribunal then competent to judge them.

Evils of Kulinism

Alliance with the Kulíns is much sought after by Bráhmans of lower ranks. The Kulíns suffer in social prestige by it and become what are called Bhanga Kulíns.* They are therefore, handsomely compensated for such alliances; and the more needy among them find it very profitable to form matrimonial connections with non-Kulíns. Once fallen (Bhanga) they can not fall any lower; so they go on marrying until marriage becomes quite a trade with them. They are known some times to have married no less than four wives in the course of one day. Sometimes all the unmarried daughters and sisters of one man are given in marriage to one and the same Bhanga. Cases are known of Bhangas having married as many as one hundred wives. Marriage is sometimes resorted to by them as the sole means of subsistence. They are not of course required to support their wives who remain with their parents. Not only so; the Bhangas would not even

* Literally, Kulins whose Kulinism has been 'broken'.

visit their wives except for a consideration. When they want money, they have only to go to their fathers-in laws' houses. It is no wonder, that such marriages, if indeed they can be called marriages, lead to crimes of the most heinous nature such as abortion and infanticide. In rare instances they result in prostitution. Such marriages are opposed to all principles of morality and to dictates of common sense; and it need hardly be said, they are nowhere sanctioned in the Hindu Sástras. Under normal conditions of matrimony which would oblige a polygamist to live with and maintain his wives and children, polygamy works its own cure; and elsewhere than Bengal, the practice is practically confined to Rájás and Mahárájás. Even amongst these, there is now a tendency towards monogamy; there are several feudatory chiefs who have contented themselves with one wife. But the Bhanga Kulíns of Bengal have not to maintain and live with their wives; on the contrary their wives are a source of income to them. Consequently, the only limit to the number of their marriages is the extent to which an absurd and vicious custom can blind parents to the happiness of their daughters

Steps for the suppression of Kulinism.

One of the earliest effects of the influence of the English environment was to open the eyes of the Hindus in Bengal to the enormity of the evils attendant on polygamy such as we have described above. Rámmohan Roy wrote strongly against it. But no organised steps were taken for its suppression until 1866, when a peti-

tion signed by the Mahárájá of Burdwan and twentyone thousand other Hindus of Lower Bengal was presented to the Lieutenant-Governor of Bengal, praying for an enactment to prevent the abuses attending the practice of Kulinism. The Government, however, could not see their way to legislation on the subject.

In 1871, I'svarachandra Vidyáságara revived the agitation on the subject, and published a list of one hundred and thirtythree Kuli'ns belonging to seventysix villages who had wives ranging from five to eighty. Quite recently a vernacular newspaper of Calcutta (the *Sanjivani*) has been publishing lists of polygamous marriages. The information collected from four hundred and twenty-six villages shows five hundred and twenty polygamists of whom one hundred and eighty have three wives each, ninety-eight four each, fifty-four five each, thirty-five six each, twenty-six seven each, twenty eight each, ten nine each, nineteen ten each, nine eleven each, 12 twelve each, five thirteen each, eleven fourteen each, four fifteen each six sixteen each, two seventeen each; one has nineteen wives, three have twenty wives each, one has twenty-one wives, two have twenty-two wives each, one has twenty three wives, four have twenty-five wives each, one has twenty-six wives, one has twenty-seven, one has twenty-eight, one has twenty-nine, four have thirty wives each, two have thirty-two wives each, one has thirty-four wives, one has thirty-five, one has thirty-six, one has fifty, one has sixty-seven and one has one hundred and seven wives.*

* Among the polygamists, the following deserve special notice:—
A boy of 15 years has four wives, 1 boy of 16 years has three

With the spread of education, the public opinion against polygamy is becoming stronger every day. The National Social Conference composed chiefly of Neo-Hindus of the conservative type has been passing resolutions condemning it ; and the more orthodox Hindus forming the Dharma Mandal have also been devising means for its suppression.

Out of 1739 members of the Puna Social Reform Association who have taken pledges, only 272 have not taken the pledge not to marry a second wife in the life-time of the first and the pledge does not apply to three lady members. Of the remaining 1474 persons, two promise never to marry again, and 1432 have taken the pledge absolutely, while 30 have done so under certain circumstances, which as stated by some of them, are want of issue by the first wife, her incapacity or her consent.

wives, 1 boy of 16 years has 7 wives, 2 young men 20 years old have 8 wives each, 1 young man of 22 has 17 wives, 1 of 32 has 20 wives, and 1 of 37 has 35 wives Pologamy among educated men is rare, only three cases of such polygamists are cited, and they have not more than four wives each.—Report of the Sixth National Social Conference (1892). pp. 22-23.

CHAPTER III.

SATÍ. *

Earliest references.

When or how the practice of Satí began is not exactly known. A passage in the Rigveda which was supposed to sanction it was found, on examination, to have been, in the words of Prof. MaxMuller, "mangled, mistranslated, and misapplied." †

* Literally, *Satí* means a chaste woman. In Anglo-Indian literature the term is usually applied to the practice of the concremation of widows.

† The passage (Rigveda X, 18, 7) runs thus :

"May these women, who are not widows, who have good husbands, who are mothers enter their houses with collyrious butter. Let these women, without shedding tears, and without any sorrow, *first* proceed to the house, wearing valuable ornaments."

In this passage, the Sanskrit word for first, "agre," was altered into "agne". See Rájendralála Mitra, "Indo-Aryans," Vol. I., pp. 147, *et seq.*; R. C. Dutt, "A History of Civilisation in Ancient India (1893) Vol. I. p 74. Wilsons "Essays on the Religion of the Hindus" (London, 1862) pp. 270. *et. seq.*

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The earliest authentic mention of the practice of Satí is by Aristobulus, who "speaks of it as one of the extraordinary local peculiarities which he heard of at Taxila." *

But the oldest Smritis such as the Manusamhitá and Yájnavalkya Samhitá do not sanction Satí. It is, however, alluded to or recommended by many of the later authorities such as Atri, Vishnu, Hárita, Usanas, and Parásara.† In the Manusamhitá, the widow is enjoined to lead a life of ascetic austerity. She should "emaciate her body by living voluntarily on pure flowers, roots, and fruits; but let her not when her lord is deceased, even pronounce the name of another man. Let her continue till death forgiving all injuries, performing harsh duties, avoiding every sensual pleasure, and cheerfully practising the incomparable rules of virtues which have been followed by such women as were devoted to one only husband."‡ This passage while showing that the practice of Satí was still far from common proves the exaggeration to which the sentiment of female chastity had been carried already. The step from such a life as the widow is here directed to lead to concremation was

* Elphinstone's "History of India" (1874), p. 265.

† Passages from Angíra, Hárita, and Vishnu are quoted by Rám Mohan Roy (" English Works," Calcutta, 1885, Vol. I. pp. 297-299):

"As long as a woman shall not burn herself after her husband's death, she shall be subject to transmigration in a female form." (Hárita).

"After the death of her husband a wife must live as an ascetic, or ascend his pile." (Vishnu)

‡ Manu V. 157-158.

a long step. Still it was only a step; and it is not unlikely that the successors of Manu took it to prevent any possible violation of the sentiment they valued so highly. It is noteworthy that the practice has been most prevalent in the higher and more civilised castes. Widow marriage prevailed among the lower classes in ancient times, as it does now.

Later references

Satí would appear to have been well established about the time of Varáhamihira who died towards the close of the sixth century A. D. He "praises women in his Astronomy, because they enter the fire on losing their husbands while men go and marry again on losing their wives." Alberuni who wrote in the eleventh century says: "If a wife of a Hindu loses her husband by death, she cannot marry another man. She has only to choose between two things, either to remain a widow as long as she lives or to burn herself; and the latter eventually is considered the preferable, because as a widow she is ill-treated as long as she lives."*

Whatever the origin of the Satí rite may have been, all the authorities insist upon its being voluntary. The widow must "*voluntarily* ascend and enter the flames to destroy her existence allowing her, at the same time, an opportunity of retracting her resolution, should her courage fail from the alarming sight or effect of the

* Alberuni's "India" translated by E. C. Sachau Vol. II. p. 155.

flames; and of returning to her relatives, performing a penance for abandoning the sacrifice, or bestowing the value of a cow on a Bráhman."* What, however, was originally recommended to be voluntary, in practice gradually became, in many cases, more or less compulsory.† The exhortations of priests and relations left the widow but little freedom of choice. Even drugs were sometimes employed to stupify her into consent.

Preventive measures taken by Akbar.

Several of the Mahomedan Emperors, however, discouraged Satí, and adopted measures to prevent its abuse as far as possible. Akbar appointed inspectors in every city and district, who were to watch carefully over all cases of widow-burning, and to prevent any woman being forcibly burnt. A case is mentioned in the *Akbar-nama*‡ which strikingly illustrates Akbar's humanity and love of justice. On the death of Jai Mal (an officer in his service) his wife was unwilling to burn, but her son Udai Singh, with a party of his bigoted friends, resolved upon the sacrifice. The matter came to the Emperor's knowledge, and his humanity made him fear that if he sent messengers to stop the proceedings, some delay might occur, so he mounted his horse, rode with all speed to the place, and saved the widow.

* Ram Mohun Roy's "English Works," Vol. I. p. 356.

† "After the bodies have been reduced to ashes, the Bráhmins take whatever is found in the way of melted gold, silver, tin, or copper, derived from the bracelets, earrings, and rings, which the women had on; this belongs to them by right." "Travels in India" by J. B. Tavernier, London, 1889, Vol. II. p. 213.

‡ Elliot's "History," Vol. VI. p. 69.

Sati ceremonies.

Raghunandan a distinguished expounder of Hindu Law, who lived in the sixteenth century thus describes the ceremonies of the concremation of widows:

Fire having been applied by the son or other relation according to the rules laid down in the *Grihya* rituals followed by the family, and the funeral pyre having blazed forth, the virtuous widow, wishing to accompany her husband, having bathed, and having put on a pair of cloths washed clean, with the *kusa* grass in her hand having sipped water by the tips of her fingers, with her face turned towards the east or the north, and having taken in her hand the *tila* seed, water and three *kusa* grass, when the Bráhmins have pronounced *Om Tat Sat*, meditating on *Narayana*, should say: 'Namo today, this month, this day of full or new moon, I ,of such a *gotra*, of this name, desiring to attain the glory of the heavens to be obtained by acting like *Aroondhatee*, to dwell in the regions of bliss, rejoicing with my husband as many years as there are hairs in the human body, to purify the three families of my mother, father, and father-in-law, to be glorified by the *Apsaras* as long as fourteen Indras last, to enjoy the company of my husband and to purify my husband from the sins of Brahmin-murder, ingratitude and betrayal of friends, do ascend the flaming funeral pyre of my husband: (In the case of postcremation instead of 'I ascend the flaming funeral pyre of my husband,' the widow should say, 'I follow my husband in death by entering the flaming pyre). With this solemn declaration, she should then make the following invocation, "O ye eight Lokapalas! O thou the sun, the moon, the air, the fire, the atmosphere, the earth, the water, the Being who resides in the heart and knows it, the death, the day, the night, the twilights both evening and morning, and the religion! Be ye witness, I follow the body of my husband by ascending the flaming funeral pyre," (in the case of postcremation, instead of 'I follow the body of my husband' the widow should say 'I follow my husband in death,') and go three times round the fire of the flaming pyre, and then, while the Bráhmins recite the following *mantra* of the Rigveda: "Let these women, not widowed, having good husbands, having applied clarified butter in their eyes for collyrium. without tears in their eyes, without any disease, fit for

all attention, being wives, ascend, after this, their proper place," and also the following *mantra* from the Pooran. "Let these women who are pious, devoted to their husbands, and handsome, enter the fire with the body of their husbands," she uttering yea yea (to these recitations should ascend the flaming funeral pyre." *

A determined case of Sati.

Many cases of Sati during the British period have been recorded by eyewitnesses. One of the most determined is the following recorded by Sleeman : †

'On Tuesday, 24th November, 1829, I had an application from the heads of the most respectable and most extensive family of Bráhmans in the district, to suffer this old woman to burn herself with the remains of her husband, Omed Singh Opuddea, who had that morning died upon the banks of Nurbudda I threatened to enforce my order, and punish severely any man who assisted, and placed a police-guard for the purpose of seeing that no one did so. She remained sitting by the edge of the water without eating or drinking. The next day the body of her husband was burned to ashes in a small pit of about eight feet square, and three or four feet deep, before several thousand spectators, who had assembled to see the Sati. All strangers dispersed before evening, as there seemed to be no prospect of my yielding to the urgent solicitations of her family, who dared not touch food till she had burned herself or declared herself willing to return to them. Her sons, grand-sons and some other relations remained with her, while the rest surrounded my house, the one urging me to allow her to burn, and the other urging her to desist. She remained sitting on a bare rock in the bed of the Nerbudda, refusing every kind of sustenance, and exposed to the intense heat of the sun by day, and the severe cold of the night, with only a thin sheet thrown over her shoulders. On Thursday, to cut off all hope of her being moved from her purpose, she put on the Dhujja, or a coarse red

* "The English works of Raja Rammohan Roy" Vol. I. p.p. 353-354.

† "Rambles and Recollections of an Indian Official," (1844) Vol. I., p.p. 23 *et seq.*

turban, and broke her bracelets in pieces, by which she became dead in law, and for ever excluded from caste. Should she choose to live after this, she could never return to her family. * * * She had resolved to die 'I have' said she 'tasted largely of the bounty of the Government having been maintained by it with all my large family in ease and comfort upon our rent-free land and I feel assured my children will not be suffered to want: but with them I have nothing more to do; our intercourse and communion here end. My soul is with Omed Sing Opuddea and my ashes must here mix with his. Again looking to the Sun—'I see them together,' said she, with a tone and countenance that affected me good deal, 'under the bridal canopy, alluding to the ceremonies of marriage; and I am satisfied that she at that moment really believed that she saw her own spirit and that of her husband under the bridal canopy in Paradise.

"I tried to work upon her pride and he fears. I told her that was probable that the rent free lands by which her family had been so long supported might be resumed by the Government as a mark of its displeasure against the children for not dissuading her from the sacrifice; that the temples over her ancestors upon the bank might be levelled with the ground, in order to prevent their operating to induce others to make similar sacrifices; and lastly, that not one single brick or stone should ever mark the place where she died, if she persisted in her resolution. But if she consented to live, a splendid habitation should be built for among these temples a handsome provision assigned for her support out of these rent-tree lands, her children should come daily to visit her, and I should frequently do the same. She smiled, but held out her arm and said, 'My pulse has long ceased to beat, my spirit has departed, and I have nothing lett but a little *earth* that I wish to mix with the ashes of my husband. I shall suffer nothing in burning, and if you wish proof, order some fire, and you shall see this arm consumed without giving me any pain?' I did not attempt to feel her pulse, but some of my people did, and declared that it had ceased to be perceptible. At this time every native present believed that she was incapable of suffering pain; and her end confirmed them in that opinion.

"Satisfied myself that it would be unavailing to attempt to save her life, I sent for all the principal members of her family, and consented that she should be suffered to burn herself if they would enter into

engagements that no other member of their family should ever do the same. This they all agreed to, and the papers having been drawn out in due form about midday, I sent down notice to the old lady, who seemed extremely pleased and thankful. The ceremonies of bathing were gone through before three, while the wood and other combustible materials for a strong fire were collected, and put into the pit. After bathing she called for a pán (betel-leaf), and ate it, then rose up, and with one arm on the shoulder of her eldest son, and the other on that of her nephew, approached the fire. I had sentries placed all round, and no other person was allowed to approach within five spaces. As she rose up, fire was set to the pile, and it was instantly in a blaze. The distance was about 150 yards: She came on with a calm and cheerful countenance, stopped once, and casting her eyes upward, said," Why have they kept me five days from thee, my husband?" On coming to the sentries her supporters stopped: She walked once round the pit, paused a moment, and while muttering a prayer, threw some flowers into the fire. She then walked up deliberately and calmly to the brink, stepped into the centre of the flame, sat down, and leaning back in the midst as if reposing upon a couch, was consumed without uttering a shriek or betraying one sign of agony. A few instruments of music had been provided, and they played as usual as she approached the fire; not as is commonly supposed, in order to drown screams, but to prevent the last words of the victim from being heard, as these are supposed to be prophetic, and might become sources of pain or strife to the living. It was not expected that I should yield and but few people had assembled to witness the sacrifice, so that there was little or nothing in the circumstances immediately around to stimulate her to any extraordinary exertions; and I am persuaded that it was the desire of again being united to her husband in the next world, and the entire confidence that she would be so if she now burned herself, that alone sustained her. From the morning of the day he died, Tuesday, till Wednesday evening, she ate pans, or betel-leaves, but nothing else; and from Wednesday evening she ceased eating them. She drank no water from Tuesday. She went into the fire with the same cloth about her that she had worn in the bed of the river; but it was made wet, from a persuasion that even the shadow of any impure thing falling upon her when going to the pile contaminates the woman unless counteracted by the sheet moistened

in the holy stream. I must do the family the justice to say, that they all exerted themselves to dissuade the widow from her purpose; and had she lived, she would assuredly have been cherished and honoured as the first female member of the whole house."

Statistics.

Reliable statistics of Satí previous to 1815 are not available. From the following figures, the rite would appear to have been most prevalent in the Calcutta Division. *

	1815	1816	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828
Calcutta Division.	253	289	442	544	421	370	372	328	340	373	398	324	337	309
Dacca.	31	24	52	58	55	51	52	45	40	40	101	65	49	47
Murshida-bad.	11	22	42	30	25	21	12	22	13	14	21	8	2	10
Patna.	20	29	49	57	40	62	69	70	49	42	47	65	55	55
Benares.	48	65	103	137	92	103	114	102	121	93	55	48	49	33
Bareilly.	15	13	19	13	17	20	15	16	12	10	17	8	18	10

Preventive measures taken by the E. I. Company.

After the establishment of the British Rule, the first important step for the repression of Satí, was taken by Lord Wellesley on the 5th February, 1805. The Government then asked the appellate Judges to "ascertain

* "History of British India." By Mill and Wilson, (1858), Vol. IX, p. 189

how far the practice was founded on the religious opinions of the Hindus. If not founded on any precept of their Law, the Governor-General hoped that the custom might gradually, if not immediately, be altogether abolished. If however, the entire abolition should appear to the Court to be impracticable in itself or inexpedient, as offending Hindu religious opinion the Court were desired to devise means for the prevention of the abuses, such as the use of drugs and the sacrifice of widows of tender age. The Judges asked the Pundits whether a Hindu widow is "enjoined" by the Sástras voluntarily to burn herself with the body of her husband. They replied that "every woman of the four castes is permitted to burn herself," except in certain cases.

The Judges in their reply to Government stated "that they considered the immediate abolition highly inexpedient, although they thought it might be gradually effected, and at no distant period." They also suggested "the enactment of provisions for preventing the illegal, unwarrantable and criminal abuses, which were known to occur in the performance of the rite."* These suggestions, however, were not acted upon until 1813, when it was ordered that the *Satí* rite "should never take place without previous communication to the Magistrate or the principal officer of Police, who was to ascertain that it was entirely voluntary: that the widow was not under the influence of stupifying and intoxicating drugs;

* "History of British India" Mill and Wilson, Vol. IX. p. 185.

and that she was not under the age of sixteen, and not pregnant." The rite was to be performed in the presence of the Police who were to see that no intimidation or violence was employed.

Effect of these measures.

These measures did not appear to have the desired effect It was even inferred, that the practice increased in frequency with the activity of the supervision to which it was subjected; and that the regulations promulgated for its repression, had by recognising its legality, afforded it the countenance of the Government and favoured its continuation. "This influence" observes Wilson "was probably erroneous; and the increased number of Suttees, during a part of the time at least for which returns were made, was to be accounted for by the prevalence of unusual mortality, and, throughout the whole period, to greater precision in the police reports. The possibility, however, of such a result, combined with the general and growing abhorrence of the sacrifice, was gradually overcoming the fear of encountering the consequences of more decided interposition; and the abolition of the practice, either universally, or in those provinces where it was of comparatively rare occurrence, had been strenuously urged by several of the Company's most experienced functionaries."* Amongst the Hindus themselves, western ideas had already begun to spread. Rám Mohun Roy opposed Satí with all his vigour and ability. In 1818, he wrote a "Conference between an advocate for, and an opponent of, the practice of burning widows alive." In this brochure, he answered, in dialogue

form, the arguments which used at the time to be urged in favour of the practice. He followed up this pamphlet by another in 1820, which he dedicated to the Marchioness of Hastings. In 1823, Lord Amherst made illegal the burning of a widow with the body of her deceased husband. It was also legislated that widows intending to perform the rite should personally apply to a Magistrate, that families in which Satí took place would be disqualified for Government employment and that all property belonging to the Satí and her husband was to be forfeited to the State.

Opinions on the abolition of Sati'.

Soon after his arrival in India, Lord William Bentinck circulated a confidential letter to some of the officers of the Government calling upon them for their opinions with regard to the immediate or gradual abolition of the practice of Satí. The replies given are thus summarised by Wilson †:—

"No difference was entertained as to the barbarous character of the ceremony, and the desirableness of its total abolition; but whether it could be attempted with success and with safety, gave rise to much diversity of opinion. It was urged against the measure, that the abolition of the rite by the will of the Government was a departure from the principles of toleration hitherto professed, and was an interference with the religion of the Hindus, from which all previous Governments, while equally abhorrent of the practice, had been deterred by the dread of mischievous results, and that such consequences were still to be apprehended from its forcible suppression—that, even if an extensive and formidable insurrection should not occur, it was

* "History of British India" Vol. IX. pp. 186–187.

† "History of British India" Vol. IX. pp. 187–190.

likely that local tumults would take place which could not be allayed without loss of life and widely-extended disaffection, which would shew itself in perpetual attempts to evade or resist the law—would inspire the people with fear and hatred of the Government, and would oppose an indefinite interruption to the progress of improvement which had been commenced within the last few years, and had been attended with the most favourable indications of ultimate success—indications which had shewn themselves even in regard to the subject under discussion, as the practice was evidently diminishing, particularly among persons of respectability, without whose encouragement it would gradually fall into disuse; and, finally, that the stability of the British Empire in India might be imperilled, if the native army, composed as it was in a large proportion of Hindus of high caste, should take part with their countrymen in resistance to the measure. In answer to these objections it was maintained, that the rite of concremation was not an essential part of the Hindu religion, as it was not even alluded to by Manu, the law-giver, held in the highest veneration by the Hindus; and that consequently it was no infringement of the principle of toleration to prohibit the continuance: that, even if it could be so regarded, it was not likely to fill the Hindus with any apprehension of the ultimate designs of the Government, as they would ascribe the act to its true motives—feelings of humanity—and would learn, from subsequent proceedings conducted in the spirit which had always influenced the state, to discard any temporary impressions of fear or mistrust. The course which the preceding administrations had pursued was no doubt, to be justified by the reasons by which it was dictated; and under similar circumstances, would still have to be followed; but the circumstances, of native society and the progress of enlightened ideas had now become propitious to more decided legislation. It was possible that some attempts might be made to resist the enforcement of the prohibition, but they were not likely to be frequent or formidable, or beyond the exercise of the civil power: for the great seat of the rite was the province of Bengal, the inhabitants of which were noto-

riously an unresisting and spiritless race: were the ceremony frequent in the Upper, instead of the Lower Provinces, in the midst of a bold and manly people, the impunity of the prohibition might be less problematical: in the vicinity of Calcutta, such was the want of courage and vigour of character, and such the habitual subserviency of centuries, that insurrection or hostile opposition to the will of the ruling power might be affirmed to be an impossible danger. That although for a time discontent and distrust might disincline the people to accept the amelioration of their moral and intellectual condition benevolently offered by the Government, yet the check, if any were suffered, would be transient, and the disinclination would give way to the expectation of advantage, and to a returning reliance upon the adherence of the Government to the principle of noninterference with religious belief, in all matters in which it is not incompatible with the security of property or person. That it was doubtful how far the decline of the practice could be ascribed to the dissemination of instruction, as little or no change could have yet affected the bulk of the population, and the process of self conviction must be precarious and remote. The only remaining consideration of sufficient weight to justify hesitation was, therefore, the feeling which the abolition of the rite might excite in the minds of the native soldiery; and on this subject, although several distinguished officers considered it dangerous and unadvisable, yet the majority concurred in opinion that the Hindu Sipahis took little or no interest in the question. In the districts from which they are mostly drawn, the practice was unfrequent; and it still more rarely occurred in cantonments, as the men were not usually accompanied by their wives; the greater number had, therefore, never even witnessed the rite, and felt no personal concern or pride in its perpetuation. Some danger might accrue from the instigations of ill-disposed and intriguing individuals, inimical to British Rule; and it might be unsafe to call upon the troops to take any part in enforcing the prohibitory provisions of the law; but as long as these sources of insecurity could be obviated, and as long as the Sipahis felt

assured that the Government was determined to respect their religious habits and usages in all essential points, its interference in the case of Suttee would neither alarm their fears, nor impair in any degree their loyalty and devotion to the service."

Abolition of Sati' by Lord William Bentinck.

After considering all these opinions, Lord William Bentinck formed the determination of passing an Act for the suppression of Satí throughout the British Territory. Even Rám Mohun Roy was staggered when Lord William told him that he had made up his mind to abolish Satí throughout British India. Rám Mohun Roy advised that the prohibition should be confined to Bengal, and not extended to the North-Western Provinces inhabited by a more warlike race. Lord William replied, that such restriction would exhibit a degree of weakness incompatible with the British character. "Strong as his nerves were known to be, his anxiety on this occasion, as the time approached for laying the Act before Council, was observed by those about him, and was particularly obvious to those who could judge of the workings of his mind from his countenance and demeanour. The only opposition it encountered at the Council Board had reference to the clause which permitted the Nizamut Adawlut to punish the crime with death. It was reasonably urged, that to inflict the extreme penalty of the law in a transaction which our Government had previously legalized, would be an act of inconsistency. But the Clause was passed without alteration, as the Members of Council were unwilling, by retarding the immediate enforcement of the regulation, to afford time for remonstrances from the

natives, which they knew would be warmly seconded by the European opponents of the measure whose sympathies were entirely Hindu."*

With the concurrence of his Council, Lord William Bentinck promulgated Regulation XVII of 1829, by which the practice of burning or burying alive Hindu widows was declared penal. The police were directed to prevent its performance, and to apprehend the parties engaged in aiding or abetting it, who should be liable to trial for culpable homicide, and subject to capital punishment, or imprisonment and fine, according to the circumstances of the case. The Regulation was re-enacted at Madras in 1830. At Bombay it was considered sufficient to rescind the exemption from the punishment of culpable homicide, which had been accorded to persons aiding and abetting Satí.

The Regulation provoked but little resistance. Only

A case of resistance.

one case of serious resistance occurred five years after their promulgation "in a dependency at the Bombay Presidency, where, upon the death of the Rajah, five of his wives were forcibly burnt, in defiance of the efforts of the Assistant Political Commissioner to prevent it; although he had a force of 300 men at his command, a still larger body of armed men was assembled, whe were not dispersed without loss of life and the necessity of calling in regular troops."†

* *The Calcutta Review.* Vol. I, p. 364.

† "History of British India." by Mill and Wilson Vol. IX. p. 191. (Foot note).

Address to Bentinck.

On the passing of the Act for the abolition of Satí, an address was presented on the 16th January 1830, to Lord William Bentinck by Ram Mohun Roy, Kali Nath Roy, Hari Har Datta and others on behalf of 300 inhabitants of Calcutta. It elicited the following reply from Lord William Bentinck : †

"It is very satisfactory for me to find that, according to the opinions of so many respectable and intelligent Hindus, the practice which has recently been prohibited, not only was not required by the rules of their religion, but was at variance with those writings which they deem to be of the greatest force and authority. Nothing but a reluctance to inflict punishment for acts which might be conscientiously believed to be enjoined by religious precepts, could have induced the British Government at any time to permit, within territories under its protection, an usage so violently opposed to the best feelings of human nature. Those who present this address are right in supposing that by every nation in the world, except the Hindoos themselves, this part of their customs has always been made a reproach against them, and nothing so strangely contrasted with the better features of their own national character, so inconsistent with the affections which unite families, so destructive of the moral principles on which society is founded, has ever subsisted amongst a people in other respects so civilized. I trust that the reproach is removed for ever; and I feel a sincere pleasure in thinking that the Hindoos will thereby be exalted in the estimation of mankind, to an extent in some degree proportioned to the repugnance which was felt for the usage which has now ceased."

Appeal against the Sati' Act rejected.

The orthodox Hindu party in Bengal memorialised the House of Commons against the Act abolishing Satí. A counter memorial in favour of the Act was presented to

† "English Works of Raja R. Roy" 'Vol. I. p. 486.'

both the Houses by Rám Mohan Roy. The appeal against the Act was rejected on the 11th July, 1832.

A recent case of Sati'.

Since the passing of Lord William Bentinck's Act, cases of Satí have been very rare. One such rare case of a most atrocious character occurred near Monghyr. It is thus described in a letter dated 4th December 1863, from the Secretary to the Government of Bengal to the British Indian Association of Calcutta:— *

"The intention of the widow to commit Satí was generally known in the neighbourhood early in the day on the morning of which her husband died and that when she went forth, apparently at that time a voluntary victim accompanied by her husband's relations, men of the Kaith caste, the chief abettors of intended suicide, preparations had been made for the horrid sacrifice and upwards of a thousand people had assembled to witness the tragedy. Among these were several Zamindars and others, people holding a respectable position in life, whose bounden duty it was to give immediate information to the Police, yet not one was found to show the least disapproval of the intended immolation. Not only did no one endeavour to put a stop to the proceedings, to dissuade the woman from the act of self-destruction, or to warn her abettors of the legal consequences of the crime,but all were eager participators in it, and when the unfortunate victim, tortured by the flames, repented of her resolution, threw

* "Life of Raja Digambar Mitra," p. 97.

herself from the pile and tried to escape, declaring that she would not complete her self-sacrifice, many of them called out to her and reproached, saying that she would make herself and the village a laughingstock, and it is stated by one witness that they surrounded her so that she could not run away. Thus she was eventually induced or compelled to remount the pile, from which, however, unable to bear the agony, she almost immediately again fled; on this the crowd dispersed, and the wretched woman, scorched and burned, was left to roll in agony on the ground till death put an end to her sufferings. It was not till the following day that information of the occurrence was given to the Police, and the person who gave the information was the chowkeedar.

To add to the horror of the scene, and to show how deliberate was the act of abetment on the part of the relatives of the deceased, the pile was lighted by a boy of tender years, the son of one of the chief abettors, and the *Purahit*, or family priest (a miscreant who has not yet been brought to justice) made him repeat the *Mantra*, or invocation usual at a funeral, before he applied the fire."

CHAPTER IV.

FORBIDDEN FOOD AND DRINK. SEA-VOYAGE.

Beef in the Vedic period.

From the frequent allusions to the sacrifice and to the cooking of cows, bulls and buffaloes, in the earlier Vedic literature there can be no doubt, that they afforded food to the Indo-Aryans of the Rigvedic period. Even the flesh of the horse appears to have agreed with their palate, at least during the earlier portion of that period. *

In the Aitareya Bráhmana, we are told that an ox or a cow which miscarries is killed when a king or other honoured guest is received. In the Taittirìya Bráhmana detailed instructions are given for carving; and the Gopatha Bráhmana tells us how the different parts are to be disposed of. The master of the house is to get the

* For detailed information about the use of beef and spirituous liquors in ancient India, see Muir's "Sanskrit Texts," Vol. V. (1884) pp. 463-464, Romesh Chandra Dutt's "History of Civilisation in Ancient India" (1893) Vol. I., pp. 41-44, and Rájendra Lála Mitra's "Indo-Aryans" Vol. I., pp. 354-421.

sirloin and some part of the abdomen, and the mistress, the loin; the remainder is divided among the priest and others.

In the Brihadáranyaka Upanishad it is enjoined, that "if a man wishes that a learned son should be born to him, famous, a pubic man, a popular speaker, that he should know all the Vedas, and that he should live to his full age, then after having prepared boiled rice with meat and butter, they (the husband and wife) should both eat, being fit to have offspring. The meat should be of a young or of an old bull."*

The slaughter of cattle formed a part of several ancient ceremonies such as *Súlagava* or "spitted cow" (Roast beef) and *Gavámanayana* (or the sacrifice of the cow) mentioned in the A'svaláyana Sútra and other works. Flesh meat (primarily beef) was an essential part of the *madhuparka* or "honied meal' ceremony which was imperative for a certain class of priests, kings, bridegrooms. Vedic students on their return home after completing their studies, tutors coming to the pupil's house after a year's absence, fathers-in-law, uncles, and generally all guests of high rank. A cow was offered to the guest, after he had been refreshed; whereupon he said "My sin is destroyed, destroyed is my sin," and then ordered its immolation with the words "Accomplish, Amen."† In some cases, the cow after being sanctified was let loose. But in such cases, flesh-meat was procured by other

* *Op cit* VI. 4, 18-19 ("Sacred Books of the East" Vol XV. p. 219).
† A guest is hence denominated *goghna* or "cow-killer."

means: "On no account observes the commentator of A´svaláyana "should the feast be without that article." Vasishtha says, one may cook a fullgrown-ox or a full-grown he-goat for a Bráhman or Kshatriya guest; in this manner is hospitality offered to such a guest. The *Charaka Samhitá*, a medical work probably dating from before the Christian era, says that "the flesh of cows, buffaloes and hogs, should not be eaten daily," from which it may be inferred, that such flesh was then an article of food. The same work recommends "beef for pregnant women as it is calculated to strengthen the fœtus." Susruta points out the particular diseases in which beef is injurious. Nowhere in the ancient medical works of the Hindus is beef absolutely forbidden.

Animal food prohibited by Buddhism.

About the seventh century B. C., the Hindus had begun to entertain a dislike for meat, especially beef, owing, at least partly, to the inculcation of humane views with the progress of their civilisation. "Meat can never be obtained" says a Sutrakára of that period "without injuring living beings, and to injure living beings does not procure heavenly bliss."* It was however, Gautama the Buddha who first absolutely prohibited meat. One of the precepts laid down by him for a lay disciple is: "Let him not destroy, or cause to be *destroyed, any life at all*, or sanction the acts of those who do so. Let him refrain from even hurting any creature, both those that are strong, and those

* Manu's Dharma Sútra quoted by Vasishtha (IV) 7 ("Sacred Books of the East," Vol. XIV, p. 27).

that tremble in the world." The first Edict of Asoka, in whose reign Buddhism spread most in India, runs thus: "This Edict has been engraved by order of King Piyadasi, beloved of the God. One must not, here below, kill any living animal by immolating it, not for the purpose of feasts. The King Piyadasi sees much that is sinful in such feasts. Formerly such feasts were allowed; and in the *cuisine* of King Piyadasi, beloved of the Gods, and for the table of King Piyadasi, beloved of the Gods, hundreds of thousands of living beings were killed every day. At the time when this Edict is engraved three animals only are killed for the table, two pea fowls and a gazelle, and the gazelle not regularly. Even these three animals will not be killed in future."

Beef allowed even in Manu's time.

But, notwithstanding the dissemination of Buddhist views, meat, and probably even beef, was a recognised article of Hindu food about the commencement of the Christian era. In the Manusamhitá, it is said, that "having bought flesh meat or obtained it by aid of another, he who eats it after worshipping the gods or manes commits no sin." In its list of animals fit for human food, are included "the hedgehog, the porcupine, the iguana, the rhinoceros, the tortoise, and the rabbit or hare; * * * and likewise those (domestic animals) that have teeth in one jaw only, excepting camels."* This is a fairly comprehensive list in which the Bovidæ may be inferentially included.

* Manu, V. 32, 18.

Beef eating, a sin at the time of Yájnavalkya.

By the time of Yájnavalkya, the killing of cows had come to be regarded as a sin, but less heinous than the drinking of spirituous liquors by Bráhmans. Whereas the latter was held to be a *Mahápátaka*, the former was considered to be only a *Upapátaka*. The expiation for the killing of a cow as enjoined by Yájnavalkya is "the drinking of the five products of the cow, *panchagavya*, following a cow as it roams about, sleeping in a cattle-shed regularly for a whole month, and ending with the gift of a cow, or a fine equal to the value of the animal destroyed." By the beginning of the fifth century A.D., vegetarianism had become firmly established. The Chinese pilgrim Fa Hian who came to India about that time says, that throughout the country the people kill no living thing, with the exception of Chandálas only. This, however, is certainly exaggeration, for Hiouen Thsang who travelled in India about the middle of the seventh century tells us, that fish, mutton, gazelle, and deer were eaten, and that it is only certain kinds of meat such as beef and pork that were forbidden. Even in the works of the eighth century, we find allusions to the beef-eating habits of the ancient Hindus; so that the feeling against beef could not have been so strong then as it is now. "It is not to be supposed for a moment" says Rájendra Lál Mitra, "that their authors would have alluded to such a subject, and offended the feelings of their readers, had they not ample authority to be satisfied, that their readers would go with them."*

* *Op. cit.* Vol. I, p. 358.

Beef under some Mahomedan Emperors.

Several of the Mahomedan Emperors were so far Hinduised that they interdicted beef. The Emperor Nasiruddin forbade the killing of oxen. Ferishta speaks of him as practising idolatry like the Hindus, so that the Koran was occasionally placed as a stool and sat upon. Akbar also forswore beef and suppressed the slaughter of cows. As late as the beginning of the present century, the Emperor Shah Alum issued the following Firman* prohibiting the slaughter of cows in his dominions:

"Let it be known to the administrators of our Kingdom, Governors of our country, raises holding respectable position, clerks and those entrusted with the Government of the country (let God preserve it for ever). In these days, full of justice and equity, this Firman is hereby issued that in the dumb and unintelligent animal kingdom cows and bullocks are sources of numerous advantages. As the human life depends on the consumption of fruits and corns, and these cannot be produced without cultivation of land, and the cultivation depends on bullocks, therefore in the interests of the population of this vast country, we condemn the slaughter of such useful animals. With the issue of this order, the custom of cow-slaughter is totally prohibited in our kingdom, and if anybody is found to disobey this order, he shall incur the displeasure of our Government, and will receive punishment accordingly."

* It is given on authority which we have not had an opportunity of verifying.

Cow protection Societies.

Beef is now absolutely prohibited throughout India amongst all classes of the Hindus including Sikhs, Jains and other secessionists. Authentic instances are recorded of unwilling Hindus having been converted by Mahomedans by simply forcing pieces of beef down their throat. What pork is to the Mahomedans, beef is to the Hindus. No greater insult could be offered a Hindu than to call him a beef-eater. The greased cartridges were at least the immediate cause of the Sepoy out-break in 1857. The cow is held sacred, and the feeling against its slaughter is strong. Cow-protection Societies* have lately been

* The following extracts regarding these societies are from a Government of India Despatch, published in a Parliamentary paper in April, 1894.

"For some years past a vigorous propaganda has been carried on by these societies * * * the movement, although undoubtedly closely connected with the Hindoo religion was ostensibly directed towards the preservation and improvement of the breed of cattle, which it was alleged were decreasing in numbers and deteriorating in quality The preachers sent fourth by the societies inculcated the duty of treating cattle with kindness, and of providing an asylum for sick and infirm animals. To this was soon added a corollary that no Hindoo should sell cattle to persons who were likely to slaughter them, and that if a Hindoo found himself compelled to sell cattle in a fair he should inform the society, who would purchase the animal and place it in an asylum. For the expenses of the society and for the purchase of cattle voluntary contributions were made by many devout and well-meaning Hindoos.

At the beginning of the present year the societies passed out of the form of voluntary associations and assumed the organisation of a league. The principles of the organisation were laid down at a great meeting at Lar in the Goruckpore district on the 18th March, and in the Azimgarh District the league was definitely organised at a meeting at a place called Azmagarh on the 15th May. The rules framed at these meetings show how the original idea developed :—

established in various parts of India. They often buy up cows intended for slaughter and keep them until they die a natural death. Attempts on the part of Hindus to rescue cows on their way to the shambles, as well as the ostentation with which the Mahomedans in some parts kill cows during the Bakar-Id festival and thus outrage the feelings of the Hindus, sometimes lead to riots. In several Hindu States, the slaughter of cows is restricted; and in one at least, the Káshmir State, it is absolutely forbidden Even John Bull has to do without roast beef in Kashmir.

Abstention from animal food by Vaishnavas.

Of the three great sections of the Hindus, the worshippers of Vishnu in the form of Krishna, Ráma or Chaitanya profess great tenderness for animal life. Many of them abstain from animal food, as do also various other sects such as the Kabirpanthis, and the Satnámis.

Firstly.—Contributions were made compulsory on all Hindoos under penalty of exclusion from caste. Each household was directed to set apart at each meal one *chutki* (equal in weight or value to one *paisa*) of food stuff for each member of the family. The eating of food without setting apart the *chutki* was declared to be an offence equal to that of eating cow's flesh. Agents called *Sabhasads* were appointed for the collection of these contributions. Their duty was to sell them and to pay over the proceeds to the *Sabhapati* who was in charge of the funds.

Secondly.—Pounds were established to which cattle found trespassing were to be brought, and in which fines were levied for the benefit of the league."

Animal food among other Hindus.

The sacrifice of animals (goats and occasionally buffaloes) is an essential part of the creed of the Sáktas; and meat is in great favour with them. With regard to the rest of the Hindus, the Bráhmans in some parts, as in the North-Western Provinces, eschew fish and flesh, and, in other parts, as in Bengal, indulge in them. The other castes take meat all over India. Goat's flesh is relished most; and it is the most approved form of flesh food. The more orthodox Hindus would not partake of the flesh of she-goats, nor of goats which, have not been offered up in sacrifice. In the Hindu part of Calcutta, there is an image of the goddess Káli known as the "butcher Káli" set up at every shop where goat-meat is sold for the Hindus. Besides goat, sheep, wild boar, deer, antelope, hare and some kinds of game-birds are allowed; domestic fowls are prohibited though some of the lower castes of aboriginal origin which have not yet been completely Hinduised take them. * With regard to all these articles, the practice is, to a great extent, regulated by local custom. In the Punjab, the Rájputs would not scruple to partake of the flesh of the wild boar; in Central India, on the other hand they would not, as a rule, take it. In some parts jungle fowl is eaten, in some parts it is not.

Forbidden vegetable food.

With regard to vegetables, certain articles, such as garlic and onion, are forbidden to the Dvijas in the Manusamhitá. The Chinese pilgrim Fa Hian, who travelled in India about

* In a portion of the Rewah State, we found the Gonds, there called

400 A. D., says, that the people do not eat garlic or onions. The practice with regard to them, however, is almost entirely regulated by custom. In some parts, Bráhmans who would not touch meat, partake freely of onions; in other parts, Bráhmans who delight in fish and flesh, would on no account take onions.

Removal of food restrictions.

With the spread of Western ideas, the restrictions about food have to a great extent been removed. Some of the earliest educated youths in Bengal, intoxicated with the new ideas went to great extremes. They were not content with taking beef, the abomination of all sections of the Hindus; but they assumed a somewhat aggressive attitude, and, on one occasion, threw a portion of the beef they had eaten into the house of an inoffensive Hindu. * This was about sixty years ago. Since then,

Májhis, more Hinduised than in the Central Provinces, in that they have given up eating fowls and drinking liquors.

* The story is thus told by Dr. Duff, "Life of Alexander Duff" (Vol. I. p. 154):—

"In order to furnish the most emphatic proof to each other of their mastery over prejudice, and of their contempt of the ordinances of Hinduism, these friends of liberty had some pieces of roasted meat, believed to be beef, brought from the bazar into the private chamber of the *Inquirer* (a Journal edited by K. M. Banerjea.) Having freely gratified their curiosity and taste with the unlawful and unhallowed food, some portion still remained, which after the return of the Inquirer was thrown, though not with his approbation, in heedless and reckless levity into the compound, or inner court of the adjoining house, occupied by a holy Brahmin amid shouts of There is beef! There is beef!"

the movement towards greater freedom in the choice of food has been going on though with less of offensive ostentation.

Before the establishment of the British rule even smelling beef while cooking—let alone eating it—was considered an offence sufficiently heinous to be punished with excommunication.

In 1848, there was a great Hindu demonstration against missionaries and Christianity. On that occasion an elderly Hindu, addressing the boys present, said: "Babas, be followers of one God . . . . Eat whatever you like, do whatever you like, but be not a Christian." * Eating whatever one likes no longer subjects a Hindu to excommunication. We remember the time when some privacy was maintained about the matter. But no such privacy is required now. Statistics in support of sociological conclusions are seldom obtainable, and when obtained they are not often reliable. But the following figures, showing the proportion of the orthodox to the heterodox Hindus in the Jubilee Sanitarium at Darjiling, are significant :—

	1888-89.	1889-90.	1890-91.
Orthodox Hindus ...	114	163	135
Heterodox Hindus ...	181	222	186

From the figures the conclusion appears to us just, that amongst educated Hindus in Bengal, at least among those who need or appreciate a change to a sanitarium, the number of those who disregard caste-rules about

* "Life of Alexander Duff" Vol. II. p. 68.

food is, at the present day, greater than those who still observe them. The heterodox Hindus openly dine at the table, and partake of forbidden animal food cooked and served by non-Hindus or very low-caste or practically no-caste Hindus. If such is the result within 73 years of the establishment of the first English school in India, and within 34 years of the foundation of the first English University in India, one can easily predict what the result will be half a century hence with the increasing spread of English education.

Intoxicating drinks in Vedic period.

The Indo-Aryans of the Vedic period were very fond of a fermented beverage prepared with the juice of the Soma plant; so much so that the plant was worshipped as a deity, and one entire *mandala* of the Rigveda is dedicated to it. The exhilarating and inebriating effects of the Soma liqour are frequently referred to in the Rigveda. Indra drank it to such excess, that his stomach used occasionally to get distended. In one of the hymns of the Rigveda it is said that "the praiseworthy Soma has from ancient times been the drink of the gods; he was milked from the hidden recesses of the sky; he was created for Indra and was extolled." In another, Soma is thus invoked: "O Soma! there is nothing so bright as thou. When poured out, thou welcomest all the gods, to bestow on them immortality."* Elsewhere, Soma is invoked by a votary to lead him to "that realm where

* R. V. IX, 110, 8; 108, 3.

there is perennial light, and where the Heaven is placed," "to that deathless and immortal realm!" The Vedic Aryas were not satisfied with the comparatively mild Soma beverage; they were also addicted to stronger drinks *(Surá)*.

Intoxicating drinks prohibited by Buddha,

But, the evil consequences of inebriation gradually made themselves felt in Hindu society; and with the progress of their morals, the Hindus came to look upon drinking with very great disfavour. Gautama the Buddha preached: "The householder who delights in the law should not indulge *in intoxicating drinks,* should not cause others to drink, should not sanction the acts of those who drink, knowing that it results in insanity.

"The ignorant commit sins in consequence of drunkenness, and also make others drink. You should avoid this: it is the cause of demerit, insanity, and ignorance—though it be pleasing to the ignorant." *

and by Manu.

Manu included the drinking of spirituous liquors among the *mahápátakas* (the most heinous sins). The expiation for a Bráhman guilty of it is stated to be suicide by a draught of boiling hot spirit, water, milk, or cow's urine taken in a burning hot metal pot.† Another moralist prescribed a draught of molten silver, copper or lead. The punishment, however, is not left to voluntary expiation. The wise legislator Manu enjoins, that Bráhmans guilty of drinking spirits should be branded on their forehead

* Rhys Davids, "Buddhism" p.p. 138-139.

† Manu XI. 91-96.

with the mark of a "vintner's flag" ; "with none to eat with them, with none to sacrifice with them, with none to read with them, with none to be allied by marriage to them, abject and excluded from all social duties, let them wander over the earth. Branded with indelible marks, they shall be deserted by their paternal and maternal relations, treated by none with affection, received by none with respect : such is the ordinance of Manu." *

Notwithstanding such severe denunciation drinking must to a great extent have been prevalent even at the time of Manu. For, in one place, he says, that "there is no turpitude in drinking wine," but that abstention therefrom is attended by signal compensation. Elsewhere he says, that the Kshatriya and the Vaisya should abstain from *arrack* (a strong spirituous liquor), but the Súdra may drink whatever he likes. Hence a later authority concludes, "that Bráhmans alone have to abstain from all kinds of spirituous drinks, the Kshatriya and Vaishya from *arrack* or Paishti, leaving the Sudras to indulge in whatever they liked." †

Drunkenness during Mahomedan period.

Though the Koran abjures drinking, the royalty and aristocracy amongst the Mahomedans, especially during the Mogul period, were greatly addicted to it. All the emperors and princes of the Mogul dynasty, with the sole

* Manu IX. 238-239.

† Mitákshará quoted by Rájendra Lála Mitra "Indo-Aryans" Vol. I. p. 395.

exception probably of Aurangzeb, drank, and some of them to the greatest excess. Akbar laid down strict punishments for drunkenness and rioting. He established a wine shop near the palace, and put the wife of his porter in charge of it. He fixed the price of wine, and any sick person could get it by sending his own name and the names of his father and grandfather to the clerk of the shop.* But, as Badaoni observes, "people sent in fictitious names and got supplies of wine, for who could strictly enquire into such a matter?" Bábar, the founder of the Mogul dynasty, records many drinking parties in his "Memoirs"; and there is good reason to suspect that his indulgence in wine shortened his life. The emperor Jahangir says in his "Memoirs," that after having taken to wine-drinking, he took more and more from day to day, until wine of the grape had no effect upon him. He then had recourse to spirit-drinking; and in the course of nine years he got up to twenty cups of double distilled spirits, weighing no less than six seers! † His brother, prince Danyal, died of excessive drinking. The vices of the Courts must have had a demoralising effect upon those Hindus who came within the sphere of their influence.

Tántrika influence

Drinking spirits is an essential part of the worship inculcated by the Sákta Tantras. One of these works makes Siva address Deví thus:—

* *Ain-i-Akbari* (Blockmann's Translation) Vol. I. p. 192.

† *Wáki-at-i Jahangiri* "Elliot's History of India," Vol. VI p. 342.

"O sweet-speaking Goddess, the salvation of Brahmans depend on drinking wine. I impart to you a truth, a great truth, O mountain-born, (when I say) that the Brahman who attends to drinking and its accompaniments forthwith becomes a Siva. Even as water mixes with water, and metal amalgamates with metal; even as the confined space in a pot merges into the great body of surrounding space on the destruction of the confining vessel, and air commingles with air, so does dear one, a Brahman melt in Brahma, the great soul. There is not the least doubt about this, O mountain-born. Similitude with the divinity and other forms of liberation are designed for Kshatriyas and others; but true knowledge can never be acquired, goddess dear, without drinking wine; therefore should Brahmans always drink. No one becomes a Brahman by repeating the gayatri, the mother of the Vedas; he is called a Brahman only when he has knowledge of Brahma. The ambrosia of the gods is their Brahma, and on earth it is arack; and because one attains the character of a god *(suratva)*, therefore is arrack called *surá*." *

Abstention from drink among high-caste Hindus,

Notwithstanding the baneful influence of Tantrikism the great body of the higher caste Hindus, especially Bráhmans, have long held, and do still hold, drinking in abhorrence, and it is indulged in chiefly by the lower classes. But even amongst these abestention from drink is a test of respectability; even aborigines, like the Gonds, who are very fond of spirituous drinks abstain from them, at least to a great extent, when they are completely Hinduised.

and among Vaishnava and other Sects.

Abstention from drink is an essential part of the creed of a great many of the Hindu sects, old and new. The Kabirpanthis, the Satnámis, and most of the Vaish-

* *The Mátrikábheda Tantra* quoted by Rájendra Lála Mitra, "Indo-Aryans" Vol. I. p. 408.

nava sects profess to be total abstainers. The Sádhs would not allow even the mild stimulation of the betel-leaf: "Never eat nor drink intoxicating substances," says one of their commandments, "nor chew pán, nor smell perfumes, nor smoke tobacco, nor chew nor smell opium." *

Punishments prescribed by smritikáras against drinking not enforced at present.

Notwithstanding the anathemas pronounced by lawgivers and moralists like Manu and Yájnavalkya against the drinking of alcoholic beverages, and notwithstanding its inclusion among the Mahápátakas, it does not appear to have been punished, at least in recent times, even with excommunication. While cases are recorded of people having lost caste by being forced to take beef—which according to the oldest Hindu Sástras is only an *upapátaka*—or even by smelling cooked beef no case is known of excommunication due to voluntary drinking even to the greatest excess. The connivance of the Hindus at the breach of one of the most stringent ordinances of their sacred books, aided by the influence of the Western civilisation, led, about thirty years ago, to a somewhat alarming growth of the habit of drinking among the upper classes. Since then several counteracting influences presently to be mentioned have tended to restrain it. It is, however, still largely prevalent in all parts of India. In European society the presence of ladies restrain drunkenness, at least to a large extent. But in Indian Society the vice has its full play

* Wilson's "Religious Sects of the Hindus" p. 355.

unchecked by any extraneous influence. The Rev. Mr. Evans said at a meeting of the Sixth Social Conference:

"There was also another element of waste and wickedness which had recently been introduced into these festive functions, and that was the free use of *strong drinks.*

The vile habit was not known years ago in respectable circles at weddings. *Pan Supari*, a good *khana*, and *uttar* of roses used to be the tokens of sociability before, but now of late no nuptial was considered complete without a good supply of *Sharab.* Only the other day while I was at Gujranwalla in the Punjab, I heard of a Sikh Zamindar, who ordered Rs. 1200 worth of English liquor and Rs. 800 worth of native liquor to grace the nuptials of his son. This is a shame which should be stigmatized as a scandal to any respectable family.

The Kayastha community, who above all others used to be given to such habits, are fast giving them up and striving for social and moral reform, while the higher castes and classes adopt the very bacchanalian usages, which people they look down upon are abolishing.

I can only say that while I can but admire the noble efforts of the Káyasthas in their struggle for such social reforms, I stand astonished at Bráhmins and Rajputs, who are taking up the foul and filthy habits, which those below them in caste-customs are casting away."

Temperance and social reform societies.

Temperance societies and social reform associations of which we have now a large number have served to a great extent to check the progress of intemperance.* In connection with the A. I. T. Association there are now no less than one hundred thirty societies extending from Peshawar in the North to Madura in the South and comprising over one hundred thousand members chiefly from

* Report of the Sixth National Social Conference.

among young and educated Hindus. The lectures delivered under their auspices, and the tracts and journals issued by them have their effect, as also the pledges entered into by their members. Of the members of the Puna Social Reform Association, for instances 60 persons pledge themselves not to use liquor under any circumstances, 1495 promise not to do so except under medical advice, and to take the pledge adding the words "except on grounds of health." Only 182 have not taken the pledge, thus the proportion of those who have not bound themselves by the pledge under this head to those who have bound themselves is only 12 per cent.

* Mr. W. S. Caine thus speaks of an earnest Hindu worker in the cause of temperance in Southern India, Sabapathy Mudeliar, and of the good work done by temperance associations established by his efforts :

"I met Sabapathy Mudeliar for the first time in 1889, at the Fourth Indian National Congress at Allahabad. He has been a staunch friend of the Congress movement from its birth. At that time he had added to all his other sources of money-making that of abkari, or liquor contractor, for the three large districts of Bellary, Anantapur, and Kurnool. As he sat listening to the debate of the Congress on a resolution censuring the Government for their policy with regard to the sale of intoxicants, his conscience was awakened, and to use his own words, "he felt that his connection with this wretched trade was not only discreditable to himself, but displeasing to God." And immediately on his return home, he severed entirely his connection with these Government liquor contracts, sacrificing a large profit thereby. He immediately began an ardent Temperance crusade, and forming "an Association for the Suppression of Drunkenness," was elected its President. Shortly after he induced the Musalman authorities to

The agitation inaugurated by the temperance and social reform associations has led to important reforms in the excise administration of the country, and the number of liquor-shops has been considerably reduced. The Bráhma Samájes by inculcating strict temperance among their members have largely helped the work of the temperance associations. The Neo-Hindu and Theosophical movements have also served to check the progress of intemperance: even drunkards have been known to have been converted, under their influence, into total abstainers. The effect of all these influences is clearly seen in the following table of imported liquors, wines and spirits. In five years between 1858 and 1863 the quantity was more than doubled. Since 1863, however, there has been only a very slight increase as will be seen from the following table The significance of this will be evident when we consider, that the number of Europeans as also of that class of Indians who consume imported intoxicants has considerably increased since 1863.

form the "Mussalman Temperance Society," of which Kazi Abdul Lateff Saheb is the President. Both these organisations are affiliated to the Anglo-Indian Temperance Society, and a full account of the marvellous work they have done in the cause of Temperance will be found in *Abkari* for January, 1891, page 77. When I visited Bellary in November, 1890, I was the guest of Sabapathy Mudeliar, who showed me his old distillery full of milch-cows, whose milk is mostly distributed to the poor of the city. This admirable man is my ideal of a public-spirited Indian citizen, and if we had fifty such men scattered through our Indian Empire we could clear out every liquor shop in five years"

(Quoted in "Some Noted Indians of Modern Times" Madras).

Alcoholic beverages imported into India in tens of rupees :—

	Malt liquors.	Spirits.	Wines.	Total.
1858-59.	239,308	166,253	246,685	652,246
1863-64.	646,782	452,503	339,329	1,338,684
1868-69.	435,770	455,174	476,406	1,367,350
1873-74.	363,496	553,884	511,864	1,429,244
1878-79.	313,070	647,661	440,828	1,401,559
1883-84.	272,323	674,969	387,322	1,334,618
1888-89.	412,852	730,027	342,330	1,484,209

Distant Sea-voyage and residence in foreign countries.

It is one of the many inconsistencies of modern Hinduism, that while the partaking of beef (an upapátaka) and the drinking of intoxicating beverages (a mahápátaka) do not at present entail loss of caste, distant sea-voyage, which is nowhere prohibited in the oldest and most authoritative of the Hindu Sástras,* and which even in later books is never considered so heinous as drinking, is visited with excommunication. In the Rigveda there are allusions to sea-voyages undertaken by Indo Aryans. In one passage the god Varuna is said to know the paths of the birds through the sky, and the paths of the ships over the sea. Elsewhere a Rishi refers to "people who desiring to acquire wealth pray to the sea before undertaking a voyage"; Baudháyana who is supposed to have flourished in the fifth century B. C. tells us that one of the customs peculiar to Northern India is going to sea.† In the earlier centuries of the Christian

Earliest references.

* Manu (III, 158), excludes those who go to sea from Sráddhas; but he also excludes doctors, musicians &c.

† Baudháyana, I. 1, 2. "Sacred Books of the East" Vol XIV. p. 146.

era, Hindus (including Bráhmans) sailed to China, Java, and other distant lands.

Excommunication for distant sea-voyage.

The present practice is to excommunicate those who go for purposes of education or travel to Europe or America. Voyages to Ceylon, Burmah, China, or even Australia are not visited with such punishment, though the conditions under which they are made may in no way differ from voyages to the West. The idea of punishing such voyages, no doubt, originated in the fact that they cannot ordinarily be performed without the partaking of forbidden food, or of food cooked by non-Hindus. It is curious, however, that such food taken in the country, or on short voyages does not, at least in Bengal and some other parts, entail loss of caste.

A Hindu who is excommunicated for going to and residing in Europe or America may, according to present custom, be taken back into caste on his undergoing an expiatory ceremony of which an important part is the swallowing of a little cow-dung. Very few, however, probably not more than one in a hundred in Bengal, avail themselves of this means of re-admission into caste; and a movement has recently been set on foot to do away with the purificatory ceremony. The Sixth National Social Conference, carried a resolution to the effect, "that neither distant sea-voyages nor residence in foreign countries should by themselves involve loss of caste;" and a proposition to make this conditional upon the non-violation of caste rules was rejected by a large majority. It should be observed, however, that

a more recent resolution* passed in progressive Bengal is of a more retrograde character.

* The resolution passed at the last Provincial Conference held in Bengal (1894) runs thus: "That, in the opinion of this Conference, the time has come when, having regard to the important political, educational, and industrial issues which are involved, practical steps should be taken to give effect to the sea-voyage movement among Hindus, by organizing at an early date a trip across the seas to be undertaken by Hindus, due regard being had to Hindu customs and usages."

BOOK III.

SOCIAL CONDITION.

CHAPTER I.

THE SOCIAL POSITION OF WOMEN.

Greater freedom in ancient times.

The Aryan ladies of ancient India did not lead a secluded life like that of their descendants at the present day. Several of the hymns of the Rigveda were composed by female Rishis. At a meeting of theologians convened by Janaka, king of Mithila, a learned lady named Gárgi carried on discussions with the sage Yájnavalkya. Young ladies of the Vedic period appear to have had a voice in their marriage. "But the woman who is of gentle nature and of graceful form," runs a verse of the Rigveda, "selects among many her loved one as her husband."

Instances of Svayamvará.

Numerous cases of Svayamvará,* that is, of ladies selecting their own husbands, are mentioned in the Mahábhárata and other works of a later period. Kuntí, Draupadí, Sítá, and Damayantí chose their own husbands.

Devayání, daughter of a priest, offered her hand to king Yayáti. The Rájá hesitated as she belonged to a superior caste. Her father, however seeing that her resolution was inflexible overruled the question of caste and gave her in marriage to the king.

Sávi'tri'.

Sávitrí is a household word amongst the Hindus. When she became marriageable her father told her that as he had received no proposals, she must make her own selection. She drove with her companions to a forest where she met a young man named Satyaván who though of royal lineage was reduced to poverty and living in a hermitage. Sávitrí fell in love with him, and after due inquiries resolved to wed him. Returning home she expressed her wishes to her father. He however, being informed by the sage Nárada that Satyaván would die after one year, interceded with her to change her mind. But Sávitrí had given her heart away and could not think of marrying any one else. After her marriage she came to live with her husband in the forest, cast off her ornaments and other fineries, and endeared herself to everyone in her husband's family by her excellent qualities.

* At the Svayamvará, the lady chooses her own husband from among the assembled guests by placing a garland upon his neck.

A sea-side picnic.

In a picnic at a seaside place given by Krishna and most graphically described in the Harivamsa, we find, that ladies and gentlemen ate, drank, and danced together without even the reserve observed in modern European society. While bathing, "Krishna and Nárada, with all those who were on their side began to pelt water on Bala and his party, and they in their turn did the same on the party of Krishna. The wives of Bala and Krishna, excited by libations of arrack, followed their example, squirted water in great glee with syringes in their hands. Some of the Bhaima ladies, overweighted by the load both of love and wine, with crimson eyes and masculine garbs, entertained themselves before the other ladies squirting water." Refreshed by the bath, the party began to eat and drink. "Surrounded by their loved ones, they drank of Marieya, Mádhvika, Surá, and A'sava, helping them on with roasted birds, seasoned with pungent condiments, ghi, acids, sochel salt, and oil . . . . After their feast the gallant Bhima chiefs, along with their ladies, joyfully commenced again to sing such choice delightful songs as were agreeable to the ladies." *

When Ráma returned home from exile, the ladies of his family came out to receive him. Sítá was present at his installation in the Court Hall. On the occasion

* "Indo-Aryans" Vol. I. pp. 440-441. The poet, in this description has no doubt, largely drawn on his imagination. He must be presumed however, to represent the manners of the time he depicts with some approach to faithfulness.

of the coronation of Yudhishthira, Draupadí sat on the throne by his side; and Kuntí and Gándhárí were present in the Hall.

Restrictions upon female freedom in the Manusamhitá.

About the time of the Manusamhitá, restrictions which, as we have just seen, were unknown in more ancient times, began to be placed upon the freedom of ladies. "In childhood" declares Manu "a female must be subject to her father; in youth to her husband; when her lord is dead to her sons; a woman must never be independent. She must not seek to separate herself from her father, husband, or sons. By leaving them she would make both her own and her husband's family contemptible." *

"Though destitute of virtue, or seeking pleasure, or devoid of good qualities, yet a husband must be constantly worshipped as a god by a faithful wife.

"No sacrifice, no vow, no fast, must be performed by women apart from their husbands; if a wife obeys her husband, she will for that reason alone be exalted in heaven." †

While the husband can divorce his wife if she only speaks unkindly to him, she is to cling to him with blind devotion and implicit obedience. Manu, cautions the learned not to take undue delight in the company

* Manu. V., 148-149.

† Manu. V., 154-155.

of the fair sex, and enjoins the youthful pupil not to show his respect to-wards the wife of his instructor by bowing to her feet. *

On the other hand, however, it is enjoined, that "women must be honored and adorned by their fathers, brothers, husbands, and brothers-in-law, who desire their own welfare.

"Where women are honored, there the gods are pleased; but where they are not honored, no sacred rite yields reward.

"Where female relations live in grief, the family soon wholly perishes; but that family where they are not unhappy, ever prospers. †

Strict seclusion unknown in Buddhist-Hindu period.

There are passages in the Manusamhitá which clearly shew that the ladies were not yet immured in the zenana. In one place we are distinctly told, that the husband should feed his class fellows and other intimate friends with his wife. ‡ The absolute seclusion of women was unknown even in much later times. In the dramas and other works composed in the earlier centuries of the Christian era, the parts played by women show, that they exercised a very important influence upon men, and that they were treated with tenderness and respect. "In no nation of antiquity" says H. H. Wilson " were women held in so much

* Manu. II. 213-216.

† Manu. III. 55-57

‡ Manu. III. 113.

esteem as among the Hindus." In the *Kathásaritságara*, composed towards the close of the eleventh century, it is stated of a young bride, that she persuaded her husband "to throw open the doors of the inner apartment and allow free access to his friends and associates observing that 'the honour of women is protected by their own principles; and when they are corrupt all precautions are vain." In *Mrichhakati*, Chárudatta's wife converses freely with his friend; and we find ladies in the enjoyment of similar freedom in several other works.

In the *Samkaravijaya*, it is stated that Líláváti, wife of Mandana Misra, acted as arbitress in a controversy which that scholar had with Samkara. "Contemporaneous with Samkara were the four Tamil sisters, Avyar, Uppay, Valhe, and Uravay. The first sister died a virgin, much admired for 'her talents in poetry and science.' She knew chemistry; and wrote on ethics, on which subject the second sister also wrote. The two other sisters employed their pens on various subjects." *

One of the latest authentic cases of Svayamvará was that of the daughter of Jaychánd, the last Hindu King of Kanauj. Owing to a long-standing feud between Jaychánd and Prithvíraja, the last king of Delhi, the latter was not invited at the Svayamvará festival, but his effigy was kept at the gate as a doorkeeper. The princess passed by the assembled princes and placed her garland upon the neck of the effigy at the door. Prithví-

* The *Calcutta Review*, Vol. LV., p. 53.

rája hearing of this came with an armed band and carried her away. She proved a most devoted wife. When the bad news of her husband's death on the field of Panipat reached her, she ordered a funeral pyre to be prepared and entered it.

Mahomedan Influence.

That the Mahomedan occupation tended to make the seclusion of ladies more stringent than ever is evidenced by the fact, that ladies in parts such as Maháráshtra, where Mahomedan influence was never very strong, enjoy comparatively greater freedom than in other parts of India. The strictness of the Mahomedan zenana must to some extent have served as an example in Upper India. Besides, the standard of chastity among the male members of the Mahomedan nobility was never very high *; and the best protection against their lascivious proclivities was considered to be in the strictest seclusion.

It need scarcely be observed, that amongst the lower classes, the women do not lead a secluded life. They have to help their male relations in agricultural

* They were sometimes debauched to a degree. Akbar tried some peculiar remedial measures, but with what success is not known. He appointed a Daroga and a clerk to register the names of such as visited women of the town, or wanted to take them to their houses. If any body wanted to have a virgin, he was required to first apply to His Majesty and get his permission. It is said that His Majesty called some of the principal women of the town and asked them who had deprived them of their virginity. After hearing their replies, some of the principal and most renowned grandees were censured, or punished, several to long terms of imprisonment. (The *Ain-i-Akbari*, Blochmann's Translation, Vol. I. p. 192).

and other out-door occupations. Their seclusion however, invariably follows the elevation of their social status. The zenana is most stringent in large towns.

Present zenana.

In villages, ladies enjoy opportunities of walking about which are denied to their sisters in cities. Here they cannot stir out of the zenana, usually not over-commodious, and situated in narrow and not over-clean lanes at least from the Western point of view, except in palanquins and carriages with closed doors. It must not be supposed, that the zenana is felt as a hardship by the ladies themselves. They live in a world of their own and find as much happiness in it as falls to the lot of average humanity. The joint family system, presently to be described, while favouring dissentions also favours companionship.

It must not be supposed that Hindu ladies though living in the zenana do not exert any influence on the sterner sex. "Some of the rich and highly respected members of Hindu society have confessed," writes the Rev. W. J. Wilkins, "that thay owed their success in life to the sympathy, encouragement, and carefulness of their wives. As the women are most religious, their influence over sons and husband in religious matters is very great indeed."*

Some distinguished Hindu ladies during British Rule: Ahalyá Bái

Notwithstanding the restricted opportunities enjoyed by the Hindu ladies for the development of their minds, they have not unoften distinguished themselves by their business and even administrative capacity. Ahalayá Bái is a conspicuous instance. She

* "Modern Hinduism," p. 361.

administered the affairs of a large territory in Central India:

"She assumed the Government, and sat in *open durbár* at the age of thirty. She was remarkable for her patience and unwearied attention, in the consideration of all measures affecting the welfare of the country. She respected private rights sacredly, listened to every complaint personally, and studying the interests of all classes, she was a great advocate for *moderate assessment*, and rejoiced at the prosperity of her subjects. In the morning she was engaged in prayer, hearing *sacred works* read, performing ceremonies and giving alms. She lived on v egetable food. After breakfast clad in white clothes as a widow, and having no ornaments except a small necklace, she sat in open durbár from about 2 to 6 P. M.; after which she devoted two or three hours to religious discipline. The books she was fond of reading were the *Puránas*, from which she drew chiefly food for her mind. The life of self-abnegation she led, imparted to her thoughts and acts a *deep tinge of religion*: In the performance of her daily duties, as the highest authority of the land, she deemed herself answerable to God for every exercise of power; and whenever any severe measure was proposed, she said, "Let us mortals beware how we destroy the works of the Almighty." She considered herself "a weak, sinful woman." She loved truth and hated adulation. When a Bráhman submitted to her a work written by him and full of her praises, she ordered it to be thrown into the Narbadá. She was judicious in the selection of her agents. She was not only successful in the internal administration, but possessed great diplomatic powers by which the country enjoyed tranquillity as long as she governed; and she reigned for thirty years. She built numerous temples, holy edifices, dharm sálás, forts, wells, and a road over the Vindhya Range. She was not only humane to *man*, but also to the brute creation. The oxen ploughing the fields were refreshed with water, the birds and fish also partook of her compassion." * Malcolm says: "In the most sober view that can be taken of her character, she certainly appears within her limited sphere to have been one of the purest and most exemplary

* The *Calcutta Review* Vol. LV. (1872) p. 56.

rulers that ever existed; and she affords a striking example of the practical benefit a mind may receive from performing worldly duties under a deep sense of responsibility to its Creator." *

Ráni Bhaváni,

Mahárání Bhaváni ruled the Natore State with conspicuous success towards the end of the last century. She was "endowed with a large capacity for business. She thoroughly understood Zamindari affairs, and the tact and judgment with which she managed the Ráj were most admirable. * * * She enhanced the profits of several estates and arrested the ruin of others. She was a gifted genius—with the talent of governing and managing men, and her *regime* was the culminating period of the influence and wealth of the Nátore family. She was a strong-willed and large brained woman, but she was amenable to the advice of those whom she trusted. She was a proud woman, but her pride was defensive and not aggressive. It was pride of a princess who could condescend to be familiar with her Amla and officers, but could when necessary keep them at arm's length" Ráni Krishnamani was a worthy successor of Ráni Bhaváni. She was a very capable lady. "Her efforts to rescue the residue of the estate from being swallowed up by litigation and rival claims were unceasing and at last crowned with success." Her daughter-in-law, Ráni Sibeshwari, also evinced great capacity for business. A writer in the Calcutta Review notices as "the great peculiarity of the Nátore family, that the women have been immea-

* Malcolm's "Central India" (1823) Vol. I. p.p. 194-5.

surably superior to the men. While the male members have been mediocrities, the female members have been celebrities."*

English influence.

The influence of the Western environment has been to considerably slacken the rigidity of the female seclusion. Long journeys are now usually accomplished not, as in former times, in palanquins with closed doors, but in railway carriages and steamers which are not favourable for the maintenance of strict seclusion. Then, again, in cities like Calcutta, such places of amusement as Museums and Zoological Gardens are largely resorted to by ladies whose curiosity considerably shortens the conventional length of veils. "During the Calcutta Exhibition" says the Rev. W. J. Wilkins "a great mark of progress was to be seen in the thousands of Hindu ladies who were permitted to come forth from their homes to witness the great show. Ladies in bands of four to twenty were to be seen under the guidance of their young brothers-in-law, or the Zenana teachers of the various missions, most busily engaged in examining all the wonders that were collected together. The prospect and retrospect of their visit to the outside world must have given immense delight to multitudes who for years had not been permitted to see or be seen by the outside world. Some Hindu gentlemen went so far as to say that in their opinion, had the Exhibition, continued open for a

* *The Calcutta Review* Vol. LVI. p.p. 10-27.

year, the doors of the zenana-khanahs would not have been again closed; that the ladies, having once tasted the sweets of liberty, would not have been content to remain immured." *

The ladies of the Bráhma Samáj of India (the Church of the New Dispensation) lead a some-what more secluded life than their sisters of the Sádháran Bráhma Samáj. In the Church, the former sit behind screens, while a good number of the latter dispense with the necessity of such protection.

Advanced Hindu ladies in Calcutta have for sometime past been getting up Fancy Fairs and Theatricals from which however, the male sex is at present wisely excluded. They may be occasionally met with riding or driving, or at the dinner-table in hotels and refreshment rooms, at public meetings, millinery and other shops, and even at levées at the Government House. In Bengal, there are now many Hindu ladies who have graduated at the Calcutta University, and a few who are practising medicine as a profession. There are also Hindu authoresses of distinction.

There is, however, still a strong body of conservative Hindus who look upon progress such as we have just indicated with disfavour. The following extracts from a Madras paper† very fairly represent their views on the subject. We are aware of but few cases of educated ladies in Bengal to whom the charges made in them

* "Modern Hinduism" (Calcutta, 1887), p. 375.

† The *Madura Mail* quoted in the *Indian Mirror*, 14th December, 1893.

would at all apply. We do not know the exact state of matters in Madras, but are inclined to think, the writer has given undue prominence to exceptional facts.

"Before giving out our views on the subject of education for our women, let us see what sort of education is given to them. The matrons of the house give lessons to young women about the duties they owe to their relations and neighbours and the good examples they place before them, teach them better than the lessons they give. The daily avocations of a Hindu woman are—to rise early from bed, saying the name of God, to wash herself, to clean the house, to worship her deity after bathing, and then to cook food for the inmates of the house. In the midst of these avocations, she ministers to the wants of her children, and gives alms to the poor. In the event of a stranger making his appearance, be he a mendicant or a recluse, she ministers to his wants and feeds him sumptuously. After feeding the inmates of the house, she takes her meal. If a stranger comes at this time, she cheerfully cooks food for him, and considers herself happy in satiating his hunger. Young women assist matrons in these works, and thereby learn practically the duties incumbent on them. In the afternoon our women get some leisure, and they pass it profitably. There are some matrons who have read the Ramayana, the Mahabharata and other religious works: and they either peruse portions of the same or narrate the incidents described in them for the edification of the females of the neighbourhood who meet together to hear them. The accounts of the noble lives, led by Síta, Sávitri and other celebrated women of ancient times, tend not a little to imbue the minds of our women with noble ideas. This is supplemented by the edifying lessons, given by Kathaks or Puranics, from time to time.

The works of our women are not confined to their own domiciles. They cheerfully help their neighbours when necessary. They cook food for their neighbours, attend on sick persons day and night. These are the good results coming out of the training which our women receive from the matrons. The object of education is to form the mind and to make the recipients of it useful members of society. It does not matter whether education is received in a public school or in the

midst of a family, so long as the wished-for object is attained. It is true that several of the matrons are without letters: but when we see that the training they give leads to good results, we cannot but give them the meed of praise they deserve. In certain parts of India, notably in Bengal, Hindu women are seen making free use of some proverbs, when they find anything amiss on the part of the inmates of the house. These proverbs are replete with wholesome lessons and they are addressed by matrons to the juvenile members, male as well as female, in the way of admonition or advice. This also is a good method of educating our young women.

Let us now take a review of the method, adopted by educated young men, in imparting education to our women. Schools for girls are being established, and the Government are lending them their helping hands. The girls remain in these schools up to the 8th or 9th year of their age, when they are withdrawn on account of their marriage. The education that is given during this short period is necessarily of an elementary nature, and the smattering of knowledge they receive is very soon forgotten It is not too much to expect that the husbands of these girls should supplement the education their wives received before marriage, by giving them salutary lessons, but we are disappointed to notice a different state of things. And it is not a wonder.

The education our young men receive, feeds their minds with facts and figures. but fails to elevate their character, morally and religiously. These young men become themselves devotees of fashions and frivolities: and they educate their wives in a manner that would make them their suitable companions. They read with them the novels and the dramas that depict in glowing colours love scenes of a debasing nature, and thereby vitiate the tastes of the innocent girls. This is not all. They embellish them with all the decorations and fineries of European ladies, and instances are not wanting of their partaking with them foreign food Some of our so-called advanced young men give undue indulgence to their reformed wives: and the latter, as a matter of course, look upon other members of the family with disdain. They consider it a drudgery to cook and to attend to other domestic work. They pass their time in the drawing-room with a few lady companions, decorating themselves with all the embellishments that fashion has at its command. Here they pass their time, sometimes in playing and

sometimes in reading love-tales: and if they do aught that is useful, they sew woollen caps or comforters, and that is done as a diversion rather than as a work of utility. These articles are seldom used in the family. They are generally given to friends as presents.*

The doings of the so-called enlightened ladies disgust the matrons of the house, and bring in dissensions in the family. The other juvenile members, who are not of the enlightened type, perform only their share of the work So that the work, left undone by the fashionable ladies, devolves on the matrons The state of things cannot last long. The household work will be performed as long as the matrons are living, but it is hard to conceive the pitiable plight in which our young men will be placed after the demise of these good women. There are only a few among us who have means to employ cooks and maid-servants: so that, matters will come to such a pass that our reformed young men will find themselves in the painful necessity of cooking their food and performing other work. For, they will scarcely have the audacity to request their fashionable wives to perform the work of menials. Fortunately, the number of young men of this type is limited. We have made a prominent mention of their doings with a view to warn our young men generally.

There is another agency at work to give education to our women. Some of the Christian Missions are sending to the zenana, ladies brought from Europe and America to impart to Hindu females secular instructions interspersed with the doctrines of Christianity. These Christian ladies teach needle work, and this has induced our young men to open the doors of the zenana to them. The injury they are doing to the Hindu community is very great. Their teaching is secretly sapping the very foundations of our nationality. Outlandish manners are gradually permeating through the system, and the evil effects of the same are distinctly visible. The virtues for which Hindu women are famous, are, one after another, disappearing from among them. Their sympathy towards their relations and neighbours is giving place to selfishness, their regard towards their superiors is giving place to hauteur, and their remarkably religious habits are giving place to the fineries of the Euro-

* As we have said in the text, the charges made above are greatly exaggerated, at least as regards Bengal.

pean ladies. It cannot be said that our women derive no benefits from the lessons they receive, but the little good that comes out of them is smothered under the crushing weight of the injurious effects that are engendered.

Some of our reformers allow their daughters to attend school after their marriage. This may be taken to be a move in the right direction: but as there is a Christian element in the tutorial staff of the schools, established for females, good results cannot be expected. We do not deny the sincerity of purpose which actuates the Christian school mistress: but the infusion of foreign ideas among students mars the object of education. Our family system is quite different from that in vogue in Europe: so that, what is considered beneficial in that continent may not be so to this country."



CHAPTER II.

JOINT FAMILY.

Basis of joint family.

The joint family has from a remote period been the unit of the Hindu social system. Its basis is a religious one, the worship of ancestors. Its limits, according to Hindu Law, are defined by the right to perform the obsequies of the dead. It includes all who offer, receive or partake the funeral cake or *pinda,* all such being in consequence, called *sapinda* to each other.*

"A Hindu is bound to offer the *pinda* to his father, grandfather, and great-grandfather in the paternal line, and he in turn may expect to receive it from his son, his grandson, and his great-grand-son. All these.

* "A Hindu is supposed to participate after his death in the funeral oblations that are offered by any one of his surviving relations to some common ancestor to whom he himself was bound to offer them while living, and hence it is that the man who gives the oblations and the man who receives them, and the man who participates in them are all recognised as *Sapindas* of each other." Justice Dwáraká Nath Mitter quoted in *Calcutta Review* Vol. LII (1871) p 255.

therefore, comprising *seven* degrees are *sapindas* and constitute the inner most family circle. The family also comprehends all those who present the *pinda* to the same ancestor, and thus various collateral branches are included. Brothers and their sons and grandsons are all *sapinda* to each other in as much as they all offer the *pinda* to the same father." *

Present constitution of joint family.

Though the underlying principle of the joint family system is a religious one, it has long become a purely social institution. Those who choose to separate can do so without suffering any penalty. There is provision made for such separation in the Manusamhitá and other *Smritis.*

In a Hindu joint family the father, his sons, and sons' wives, his grandsons and grandsons' wives, his brothers and brothers' wives, and sometimes more distant relations, male and female all live together under the same roof. Ward cites the case of a Hindu family consisting of a grandfather with his children and grand children in a direct line, amounting to nearly fifty

* *Calcutta Review* Vol. LII. (1871) p.p. 255-256. "Outside the family circle of *Sapindas* lie a more distant set of kinsmen who are called *Sakulyas.* These are the three generations in ascent and descent beyond the *sapindas* * * * outside and beyond these again lie the *Samanodakas* or "kindred connected by libations of water: and they must be understood to reach to seven degrees beyond the kindred connected by funeral oblations of food, or else as far as the limits of knowledge as to birth and name extend." The three series of kinsmen—*Sapindas, Sakulyas, Samanodakas*—together constitute the *gotra* or Hindu *gens.*

persons. Another case given by him is still more striking: "Jugunnath Tarka Panchánan who lived to be about 117 years of age, and was well known as the most learned man of his time, had a family of seventy or eighty individuals, among whom were his sons and daughters, grandsons, great-grandsons, and a great-great-grandson. In this family, for many years, when, at a wedding or on any other occasion the ceremony called the *Sráddha* was to be performed, as no ancestors had deceased, they called the old folks and presented their offerings to them."*

"No obligation exists on any one member [of the joint family]", says Justice Markby, "to stir a finger if he does not feel so disposed either for his own benefit, or for that of the family; if he does so, he gains thereby no advantage; if he does not do so, he incurs no responsibility, nor is any member restricted to the share which he is to enjoy prior to the division. A member of the joint family has only a right to demand that a share of the existing family property should be separated and given to him; and so long as the family union remains unmodified, the enjoyment of the family property is in the strictest sense common." †

Disadvantages of joint family.

Such a system has its advantages as well as disadvantages. It removes one of the strongest incentives to work, by

* Ward's "History, Literature and Mythology of Hindus," Vol. I (1818) p. 145.

†Quoted in the *Calcutta Review* Vol. LII. p. 250.

denying the direct enjoyment of its fruits to the worker, and not only does not develop such qualities as individuality, strong-mindedness, and industry, but not unoften fosters idleness. If any member of the family finds work irksome, he can sit at home. Not only so; it is incumbent on him to marry, and as no Hindu is ever governed by Malthusian principles, he materially contributes in time to the numerical strength of the family. It should be observed, however, that public opinion and home influence—ladies behind the *purda* exert it to no small extent—keep down such cases of extreme idleness. One of the worst evils of the joint family system is the not infrequent deterioration of landed property held in coparcenary. Important improvements may be, and sometimes are, withheld because of the want of agreement among all the sharers. Besides, the larger the family. the more frequent are the occasions for jealousies and dissensions. *

* "The annoyance and the worry to which a Bengali is subjected in his home are, very often, fatal to his success in any work which demands tranquillity of soul and steady industry. The "sweet home" of a Bengali is, in the largest number of cases, a source of endless distraction and embarrassment. If the walls within which talent and genius have had to live and work could be questioned, what a tale they would tell! What a shedding of tears they have witnessed, what sighs of grief and despair they have heard! What scenes they have seen, of hearts lacerated and nerves paralysed, of struggles baffled and renewed and baffled again, of the unwilling surrender of heroic souls to the overpowering forces of domestic misery! The Hindu home has crushed many a spark of native fire, buried many a noble project. Poverty is not the worst of its destructive agencies; but the agitation of feeling caused by the living together of a large number

The mother-in-law sometimes rules with an iron hand. The Rev. Lal Bihari Dey thus describes the sufferings of the young wife Málati, at the hands of her mother-in law, Sudhámukhi: "The nectar-mouthed lady, was a source of great trial to poor Málati. For sometime, she seemed to be very kind to her, but the infirmities of temper soon discovered themselves and made Málati quite wretched. Whatever she did seemed to displease her mother-in-law. She did not sweep the floor well; her cowdung cakes (for fuel) are badly made; the curries which she cooks are execrable; she is very ill-bred; she walks more like a boy than a girl; her voice is scarcely audible; it is like the hissing of a serpent; she has a nasty, sneering, sarcastic smile on her lips whenever anything is said to her. Such were the criticisms pronounced by Sudhámukhi on Málati." *

Advantages of Joint family.

On the other hand, the joint-family system protects the weak, the incapable, and the infirm from starvation. While it prevents the accumulation of excessive wealth and the good consequences thereof, it also prevents the growth of excessive

of men and women, very few of whom are in sympathy with each other, and almost every one of whom has some grievance as against the rest, cannot fail to deaden the energies. The quarrels of women, the deep seated malice of men, the "mighty contests" which "rise from trivial things," give no rest to the unfortunate inmate of the Hindu home. The fight rages sometimes about a point of dignity, sometimes about money, sometimes about questions of authority and obedience. Occasionally of course, there is intermission of active hostilities; but no more peaceful condition is ordinarily reached than that of armed neutrality." "Kristodas Pál" by N. Ghose pp. 146-147.

* "Govinda Sámanta"—Vol II. (1874) p. 13.

poverty and the evil consequences thereof. The joint family system obviates the necessity of a Poor Law in India. True, it does not favour the industrial qualities; but it promotes such gentler qualities as charity and humanity. The head of the joint-family, the *kartá* has not the despotic powers of the head of the ancient Roman family. He has only a share in the family property which he manages in trust. "The sástras," says Mr. Cowell, "by no means placed the family under the despotic power of its chief. The *kartá* did not possess his family and his property. He rather possessed his property through his family. His obligations outweighed his authority * * * The acts of each member probably bound the corporation; and every member of it was liable, since responsibility pervaded the whole family * * * The obligation to provide for the maintenance of the joint-family is the foundation of the father's authority over the joint estate."*

English influence on joint families.

The influence of the Western enviroment has been to disintegrate the joint family system though, as yet, to a small extent.† The western ideas of individuality and family responsibility

* The *Calcutta Review*, Vol. LII, p. 285.

† "Though the influence of a foreign domination is superficial in most respects, it has been able at least to undermine the foundations of the Hindu joint family system, which, partly from this cause and partly from its own inherent defects, I cannot but look upon as a doomed institution. I am not inclined to overrate the force of Government as a solvent power in any social direction, but in this case the action of Government is, so far as I can judge, in consonance with a natural and even healthy tendency of events." (H. J. S. Cotton, *New India*, p. 184).

which are being gradually imbibed by the educated community do not harmonise with the joint family system. Signs of an increased sense of self-interest are observable in that community. There is a tendency in the English educated Hindu to ignore responsibilities beyond the circle of his nearest relations. He does not quite see the reasonableness of others sharing the fruits of his labour. The increased costliness of living as well as the rise in the standard of living under Western influence without a proportionate rise in the means to attain it has strengthened the sense of self-interest. The older class of Hindus when able often used to support not only relations of various degrees of remoteness, but also others who were in no way related to them. It is said of the late Justice Dwáraká Náth Mitter, that "his indigent relations and village friends to the number of fifty including students from different parts of the country, formed a portion of his family at his Bhowanipore house. The students received board and education at his expense. In the morning Dwáraká Náth would invariably take his breakfast with his poor relatives and the school boys, and no difference in the quality of the viands or in the manner of treatment was allowed to prevail in the house." * The exigencies of the civilised life of the present day render such conduct almost impossible.

* Life of the Hon. Justice Dwarka Nath Mitter—by Dinabandhu Sanyal pp. 62-63.

CHAPTER III.

AMUSEMENTS.

Dancing in ancient times.

Dancing is one of the most primitive sources of enjoyment. It is indulged in by almost all the aboriginal tribes, such as Bhils, Gonds, Lepchás, and Nágás. It appears to have afforded amusement to our Indo-Aryan ancestors of the Rigvedic period. In one hymn, Ushas (Dawn) is described as putting on her gay attire, like a dancer. In another, allusion is made to "the living going forth to dance and to laugh after a funeral."* In subsequent times it was reckoned as an accomplishment which high-born ladies were expected to acquire. Arjuna disguised as a eunuch taught dancing and music to the daughter of the king of Viráta. In the "Harivamsa," there is an interesting description of a dancing party which included such distinguished personages as

* R. V. I. 92, 4; X. 18,3. Muir's "Sanskrit Texts" Vol. V. (1884) pp. 185,466.

Krishna, Baladeva, and the sage Nárada. Ladies and gentlemen danced together "The practice was for each man to have his wife for a partner; those who came without their wives danced with courtezans, but all in the same arena."

Description of an ancient dancing party.

"Inflamed by plentiful libations of *kadamba* liquor, Balaráma the majestic, danced in joy with his wife, the daughter of Revata sweetly beating regular time with his own hands. Beholding this, the damsels, were delighted. The wise and noble Krishna, to enhance the enjoyment of Bala, commenced to dance with his wife, Satyabhámá. The mighty hero Pártha, who had come to this sea-side picnic with great delight, joined Krishna and danced with the slender and lovely Subhadrá (his wife). The wise Gada, Sárana, Pradyumana, Sámba, Sátyaka, the heroic son of the daughter of Sátrajit (Satyabhámá), the handsome Chárudeshna, the heroic princes Nisata and Ulmuka, the sons of Baladeva, Sankava, the generalissimo of the army of Akrura, and others of the heroic race, danced in joy. By the grace of Krishna, the pleasure boats flourished under the dense crowd of the foremost dancers of the Bhaima race. Through the god-like glory of the heroic and most ardent dancers of the Yadu race, the creation smiled in joy, and all the sins of the princes were subdued.

"The Bráhman sage, Nárada, the revered of the gods, came to the scene for the gratification of Madhusudana, and in the midst of the noble Yádavas began to dance with his matted locks all dishevelled. He became the

central figure in the scene, and danced with many a gesticulation and contortion of his body, laughing at Satyabhámá, and Kesava, at Pártha and Subhadrá, at Baladeva, and the worthy daughter of the king of Revata. By mimicking the action of some, the smile of others, the demeanor of a third set, and by similar other means, he set all a-laughing who had hitherto preserved their gravity. For the delectation of Krishna imitating the mildest little word of his, the sage screamed and laughed so loudly and repeatedly, that none could restrain himself, and tears came to their eyes (from immoderate laughing)."*

Dancing in disrepute.

Such riotous scenes probably created an aversion for dancing in the minds of the more staid and thoughtful among the Hindu community. With the gradual seclusion of the upper-class ladies, dancing ceased to be one of their accomplishments; and by the time of the Manusamhitá it had fallen altogether into disrepute. In that work, dancers and actors are called *Kusilava*, that is "those whose profession is bad," † and the "twice-born" are directed not to cultivate dancing. ‡

Since the time of Manu dancing amongst the Hindus has been confined to women of ill-repute. Professional

* Harivamsa quoted in "Indo Aryáns" Vol. I. pp. 437-438.

Harivamsa was written long after the time of Krishna; and there must be a good amount of poetical licence and exaggeration in the description we have just quoted. But that there is a substratum of fact in it, there can be scarcely any doubt. The Rásalílá has probably preserved the memory of the ancient Hindu fondness for dancing.

† Manu III. 155, VIII. 65.

‡ Manu IV. 64.

dancing women are sometimes attached to temples, and they are often employed on festive occasions.* Quite recently a movement has been set on foot in the Madras Presidency to discourage such dancing; and a resolution was passed at the last Social Conference recommending local social reform associations to do their best to discountenance such entertainments.

Dancing among radical Neo-Hindus.

A few of the most progressive among the Neo-Hindus of the radical type who visit England learn dancing there. But, they, as a rule, have but little opportunity of indulging in it on their return home; for their ladies have not, at least as yet, taken a fancy to the art.

Acting in ancient times.

Acting, like dancing, is an ancient form of social entertainment, but, unlike dancing, it does not ever appear to have been practised by people of respectability. At the sea-side

*In Madras "next to the sacrificers, the most important persons about the temples are the dancing girls, who call themselves *Deva-dasi, servants of the Gods*. Their profession requires of them to be open to the embraces of persons of all castes. They are bred to this profligate life from their infancy. They are taken from any caste, and are frequently of respectable birth. It is nothing uncommon to hear of pregnant woman, in the belief that it will tend to their happy delivery, making a vow, with the consent of their husbands, to devote the child then in the womb, if it should turn out a girl, to the service of the Pagoda. And, in doing so, they imagine they are performing a meritorious duty. The infamous life to which the daughter is destined brings no disgrace on the family." Dubois, "Manners and customs of the people of India." It is doubtful if any such custom prevails at the present day.

picnic mentioned above a "charming band of heavenly nymphs," entertained the party by exhibiting various dramatic scenes. They are described as having "acted with great delight beating time with their hands." * Actors and actresses are referred to in the Manu-samhitá and other works, though in terms which show, that they held a low position in society. There can be no doubt that dramas resembling the miracle plays of mediæval Europe were performed in India in the third century B.C. In the earlier centuries of the Christian era, Hindu Drama was carried to a high stage of perfection.

Sanskrit Drama.

The plays of Kálidása, Bhababhúti, and other dramatists show that stage directions, sometimes of an elaborate nature were observed, that the *dramatis personæ* were dressed in character; and that weapons, cars and thrones were in use. A simple curtain, however, was probably the only scenic appliance then known. † With the gradual decadence of the Hindu civilisation and the supersession of the Sanskrit by the vernaculars since the Mahomedan conquest, Sanskrit Drama was replaced by ruder and more popular plays in the vernacular tongues; or rather, such plays which must have coexisted with, or which had probably even preceded, the highly finished Sanskrit

* *Harivamsa*, quoted in "*Indo Aryans*," Vol. I. p. 436.

† See "Select Specimens ,of the Theatre of the Hindus" by H. H. Wilson, Vol. I. (1871), pp. lxvi. *et seq.*

Drama, survived its extinction. In the North-West they are known as Rásas, and in Bengal as Yátrás. * The subjects of the Yátrás are as a rule taken from the Rámáyana and the Mahábhárata, incidents from the life of Krishna and of Ráma furnishing the most favourite topics. There is more of singing than of acting in the Yátrás. What acting there is, accords but little with nature. It is the singing that keeps the attention of the audience enchained, sometimes from early dawn till near noon. Men play the parts of women. There is no stage and no scenic appliance; the actors sit in the centre of a hall or of a canopied courtyard, surrounded by the audience on all sides, and get up and act their parts. When there is any singing, it is joined in by the whole party. Altogether the Yátrás leave much to the imagination of the audience. The entire expense of the Yátrá is borne by the party at whose house it is held; sometimes it is also got up by subscription. But in either case, admission to it is free and unrestricted. It is still the most popular form of dramatic entertainment in Bengal. †

Yátrás and Rásas,

* Yátrá, derived from the root *Yá*, to go, means in the first place, a going or departing; secondly, a march, religious procession; and thirdly, a poular dramatic representation probably represented originally in connection with religious processions, especially in spring and autumn.

† Several of the published Yátrás of Eastern Bengal have been noticed by Dr. Nisikánta Chattopádhyaya in a brochure on the "Yátrás" (London, 1882).

Owing to the recent revival of the Hindu Drama due at least partly, to English influence, Yátrás have suffered considerably in the estimation of the upper classes. Raja Krishna Chandra of Nadiyá about the middle of the 18th century) is said to have patronised dramatic representations. Bhárat Chandra Ráya, a poet of his court, composed a trilingual drama called the *Chandi Nátak*, in Sanskrit, Bengali and Hindi. The first recorded Hindu attempt at dramatic performance since the time of Krishna Chandra was in the year 1859, when an amateur dramatic club in Calcutta put on the stage, the *Bidhabá Bibáha Nátaka* or "the widow marriage Drama," which giving a vivid picture of the trials and sufferings of a young Hindu widow was writen to promote the movement in favour of the remarriage of widows which had then been engaging the earnest attention of such benevolent men as Isvara Chandra Vidyáságara. Keshab Chandra Sen, the Bráhma reformer, was the stage-manager. The success of the play led soon after to the establishment of a professional Theatre. There are now five such Theatres in Calcutta. They differ but little from their European prototype except in the fact, that the seats for the accommodation of Hindu ladies are screened. The get-up of several of these Bengali Theatres would bear comparison with that of any local English Theatre. There are several Bengali actors and actresses who are by no means inferior to those who tread the boards of English Theatres. The most distinguished playwright and successful actor in Bengal is Girish Chandra Ghosh. The

Theatres.

most successful plays are those which are based upon religious subjects, such as "Prahlád Charit" and "Chaitanya Charit". The former has been on the boards of the Royal Bengal Theatre week after week for several years without scarcely any diminution of its popularity.

Amateur theatricals.

Amateur theartrical performances are occasionally got up in the larger towns in Bengal; and they are sometimes of a very creditable character. "There are two opinions" says Mr. F. H. Skrine of the Bengal Civil Service "as to the ability of educated Bengalis to wield the destinies of their country ; but there is one only amongst qualified judges as to their aptitude for dramatic displays. I speak with the confidence born of long experience; for I have founded theatres in at least half a dozen districts. Everywhere I have found in the upper and literary classes a degree of excellence as amateur actors which it would be impossible to beat anywhere."

Amateur theatricals are not confined to gentlemen. A few of the progressive Hindu ladies of Calcutta have also for several years past been finding recreation in them; nor have their performances been always confined to audiences of their own sex.

Plays in Central India.

"In Central India, the villages are," writes Malcolm, "frequently visited by drolls and strolling players : many of the latter are very clever. The subject of the satire of the plays, or rather farces, which they represent, is as often their mythological fables, as the measures

of their earthly rulers and governors The figures of the demigod Hunooman, with his monkey face,—Ganesa, with his elephant-head and portly belly,—are brought on the stage, to the great entertainment of the spectators. The incarnation of the Hindu Deities is a common topic with these players; and the frisking of the figure of a large fish, which represents one of the principal incarnations of Vishnu, always excites bursts of applause. The Rájáh, his dewan, and all the ministers of his court, are frequent objects of ridicule with the actors in Central India; but what gives most delight to the peasant is a play in which the scenes that he is familiar with are exhibited. The new manager or renter of a district, for instance, is exhibited on the stage with his whole train of officers and attendants: every air of consequence is assumed by the new superior, every form of office is ostensibly displayed; the Potails [head men of villages] and villagers are alternately threatened and cajoled, till they succeed in pacifying the great man by agreeing to his terms, or by gaining one of his favourites, who appears in the back part of the scene whispering and taking bribes. In some of these representations, the village Potail is described as losing his level, from his intercourse with courtiers and becoming affected and ridiculously great among his poor friends, and this commonly closes in some event that shews him in a condition of ludicrous degradation and repentance. Such representations are received with acclamation by the village audience of men, women, and children, who sit for whole nights looking at them. The actors are fed by the

people, and a little money is collected for their reward; they also receive a mite from the village revenue. The place of exhibition is usually a green near the village; but on particular occasions, such as marriages or festivals, a temporary building is erected."*

Music in ancient times.

The ancient Hindus made considerable progress in the art of music. † A regular system of musical notation was worked out before 350 B. C. It passed through Persia to Arabia, and was thence introduced into European music about the 11th Century A. D. ‡

* Malcolm's "Central India" (1823), Vol. II. pp. 196-97.

† At the sea-side picnic given by Krishna which has been referred to above, on the conclusion of the feast, "the gallant Bhima chiefs, along with their ladies, joyfully commenced again to sing such choice delightful songs as were agreeable to the ladies. The Lord Upendra (Krishna) was pleased at night to order the singing of the *chhálikya* song which is called *devagandharva*. Thereupon Nárada took up his Víná of six octaves whereon could be played all the six musical modes (rága) and every kind of tune. Krishna undertook to beat time with cymbals, and the lordly Arjuna took up a flute, while the delighted and excellent Apsarasas engaged themselves in playing on the mridanga and other musical instruments. Then Rambhá the accomplished actress, cheerfully rising from one side of the court, delighted Ráma and Janárdana by her acting and her exquisitely slender figure." "Indo-Aryáns" Vol. I.

‡ The following criticism on Indian music by an English writer may be interesting to European readers:

"Melodies which the Indian composer pronounces to be the perfection of harmony, and which have for ages touched the hearts and fired the imagination of Indian audiences, are condemned as discord by the European critic. The Hindu ear has been trained to recognise modifications

Among ladies.

From various passages in Sanskrit literature it appears, that ladies learnt singing. Arjuna taught singing to the daughter of the king of Viráta. Music is frequently alluded to as a feminine accomplishment. In Nágánanda we are told that the princess Malayávatí sang a song, possessing the treble and bass tones duly developed, and that she played with her fingers, keeping good time. In the Kathá Sarit Ságara it is mentioned that the princess Mrigávati attained wonderful skill in dancing, singing and other accomplishments before she was given in marriage. * There can be no doubt, however, that music was principally cultivated, as it is at the present day, by professional women.

of sound which the European ear refuses to take pleasure in. Our ears, on the other hand, have been taught to expect harmonic combinations for which Indian music substitutes different combinations of its own. The Indian musician declines altogether to be judged by the few simple Hindu airs which the English ear can appreciate. It is, indeed, impossible to adequately represent the Indian system by the European notation; and the full range of its effects can only be rendered by Indian instruments—a vast collection of sound-producers, slowly elaborating during 2,000 years to suit the special requirements of Hindu music. The complicated structure of its musical modes (*rágs*) rests upon three separate systems, one of which consists of five, another of six, and the other of seven notes, It preserves in a living state some of the early forms which puzzle the student of Greek music, side by side with the most complicated developments." Hunter's "Indian Empire," p. 111.

* Kathásarit Ságara. Translated by C. H. Tawney, Calcutta, (1880), Vol. I. p. 53.

Music in the Mahomedan period.

Though against the Mahomedan law, music, both vocal and instrumental, was encouraged by the Mahomedans. The Kashmir school of music was founded by Irani and Turani musicians patronised by Zain-ul-Abidin, King of Kashmir. We read of many Hindu musicians of note during the reigns of Akbar, Jehangir, and Shah Jehan. Miyán Tansen, the most distinguished vocalist that India has produced, was a Hindu convert to Mahomedanism; Rám Dás, was for some time with Bairam Khan, from whom he once received a reward of a lákh of rupees. His son, Sur Dás, was also a singer of note; Jagannath was one of the Court vocalists during the reign of Shah Jehan. He was once weighed in silver and received a present of 4,500 rupees. The bigoted Aurangzeb, following the letter of the Mahomedan law, ordered the dismissal of the Court singers and musicians. The historian Khafi Khan mentions a curious incident after the order had been given. The Court musicians brought a bier in front of the palace and wailed so loud as to attract the Emperor's attention. He came to the window and enquired whom they had on the bier. They said, "Melody is dead, and we are going to the graveyard." "Very well," said the Emperor, "make the grave deep, so that neither voice nor echo may issue from it."

There has scarcely been any change in Indian music since the establishment of the British Rule, except in Bengal, where there has of late been observable a

tendency towards a disregard of the conventional methods of singing. Such disregard has long been a characteristic of the *kirtans*. In them, the Bengal Vaishnavas have for several centuries past been freely giving vent to their religious emotions without any strict regard for the current rules of music But, the principle of the kirtans has, of late, been highly developed by a Bengali poet, Rabindra Nath Tagore.

Kavi.

Besides such music, vocal and instrumental, as invariably accompanies dancing and acting, there are various forms of purely musical entertainments like "Kavi" in Bengal. Several of these are gradually becoming obsolete. Half a century ago, "Kavi"† was the most popular musical entertainment in Bengal. It is a kind of contest in songs between two parties. The contest often descended to personalities. For instance, a Kavi party headed by one Anthony, who, though of French extraction, appears to have been completely Hinduised, sung addressing Deví :—

Have mercy, Mother, and save me O Mátangi !
Prayers nor rites I know, by caste a Firingi.
And when dreadful death draws nigh,
Let me find retreat,
Under the shadow, mother of thy blessed feet.

The opposite party replied :—

Thou canst not be saved, a Firingi by caste.
Go to Serampore Church, and pray to Christ at last.

† "Kavi" is a Sanskrit word which means literally, a poet.

Personalities were, however, not the only fault to be found with the Kavis. They sometimes descended to the grossest obscenities.

Páchâli and Half-Akrái.

Next to Kavi, Páchális and Half-Akráis were the most fashionable musical entertainments in Bengal half a century ago. The Páchâli is a recitation of a story in rhyme, accompanied with music. The subject is usually taken from the Rámáyana or the Mahábhárata. A writer thus wrote in the *Calcutta Review* in 1851: "Of late the Páchâli has become very fashionable, and is annually celebrated in Calcutta on a grand scale. There are many Páchâli versifiers now living, but the superiority is certainly due to Dásurathi Ráya, a native of the district of Burdwan, whose poems already amount to several volumes. The Half-Akráis too have of late become fashionable, especially in the metropolis: these are distinguished from the Páchális by more animated music and singing. During the Durgá Pujá celebrations bands of Half-Akrái and Páchâli singers may be seen marching through the streets of Calcutta with their flags hoisted, singing loud pœans of victory."* No such scenes, however, are to be witnessed now. Both Pacháli and Half-Akrái, like Kávi have become very nearly extinct.

Music among educated ladies.

In instrumental music the principal change in recent times has been the introduction of the harmonium and the piano, which, espe-

* *Calcutta Review* Vol. XV. p. 349.

cially the former, have penetrated even into the zenana. The cultivation of music at the present day is not confined to gentlemen; it is beginning to be held as an indispensable feminine accomplishment by a certain section of the progressive Hindus. Many young ladies of this class learn music with European professors. In Calcutta, the ladies can boast of several accomplished pianists, violinists and vocalists. Their performances at *soirées* and *conversazionés* have been found to be not of a mean order.

Dice-play in ancient times.

Our Indo-Aryan ancestors were very fond of a kind of game played with dice. It was often accompanied by gambling, sometimes of a most reckless character. It was at dice that King Nala gambled away his kingdom, and went into exile with his devoted wife Damayantí. It was also at dice that the sober and virtuous Yudhishthira betted away not only his kingdom, but also his brothers, his own self and even his wife! "O Varuna!" prays one of the Rishis of the Rigveda, "all this sin is not wilfully committed by us. Error or wine, anger or dice or even thoughlessness has begotten sin." Another bard says:

> "These dice that roll upon the board,
> To me intense delight afford.
> Sweet soma-juice has no more power
> To lure me in an evil hour.
> * * * * *
> As wretched as a worn-out hack's
> The gamester's life all joyance lacks.

His means by play away are worn,
While gallants court his wife forlorn.
His father, mother, brothers shout
"The madman bind and drag him out."
At times, the scorn of every friend,
I try my foolish ways to mend,
Resolve no more my means to waste,
On this infatuated taste :
But all in vain :—when, coming near
The rattle of the dice I hear,
I rush attracted by their charms,
Like lady to her lover's arms.
As to his game the gambler hies,
Once more his hopes of winning rise ;
And loss but more, his ardour fires ;
To try his luck he never tires.
The dice their victims hook and tear,
Disturbing, tourturing, false though fair." *

The evil effects of gambling and betting must have grown to inordinate proportions to have led the sage Manu to enjoin corporal punishment, and even banishment for those vices. † Still, in the seventh century, Hiouen Thsang, the Chinese traveller, found dice to be one of the most pernicious faults of kings.

Dice in modern times : Páshá.

The Páshá board consists of two very long rectangles which bisect each other at right angles so as to leave a square in the middle. Sixteen pieces are used in the game, four on each side of the board. The moves of these pieces are regulated by the throws of three dice usually made of ivory. In

* R. V. X. 34, freely translated by Dr. Muir, "Sanskrit Texts" Vol. V. (Third Edition (pp. 427-28.

† Manu. IX. 224-225.

the time of Akbar, Páshá was known under the name of Chaupar * in the North-West. Dice-play at the present day is not accompanied by gambling at least to any serious extent. It is however going somewhat out of fashion.

Chess.

The invention of the chess has been ascribed by various authorities to the Egyptians, the Chinese, the Persians, and the Hindus. 'Shatranj,' the name by which the game is known in Persia and India, is supposed by Sir William Jones to be a curruption of the sanskrit word 'Chaturanga.' Indeed, this word is supposed by Sir William to have "been transformed by successive changes into *axedrez, scacchi, echecs, chess*, and, by a whimsical concurrence of circumstances, given birth to the English word check, and even a name to the exchequer of Great Britain." † It should be observed, however that the Hindu Chaturanga consisted of four, instead of two, armies ; and the moves of the pieces appear to have been regulated by the throws of dice. Whatever the origin of chess may have been it has long been a favourite with the higher classes of Hindu society.

Cards.

Cards, though of more recent introduction than the two games just mentioned, are certainly more popular. They are played by

* *Ain-i-Akbari* (Blochmann's Translation) Vol. I. p. 303.

† "On the Indian game of chess," *Asiatic Researches*, Vol. II. pp. 159-165.

both men and women, whereas Páshá and chess are almost confined to the male sex. Cards were played in Mahomedan times. * But, the most popular games of the present day are either European, or imitations of European games. Many of the words of the Hindu card vocabulary are corruptions of European words. Such terms, for instance, as *haratan* (hearts), *trup* (trump), *vinti* (vengt), *handar* (hundred), *premara* (primero), have become quite familiar to the Bengalis.

Daspanchish.

Das-Panchish is in great favour, especially with ladies. Its board is like that of Páshá. The moves of the pieces, however, which, as in Páshá are sixteen in number, are regulated not by the throws of dice, but of Cowries. † "The long duration of the play," observed a writer in the "Calcutta Review" forty-three years ago, "the fascination which it produces, the warmth of feeling which animates the opposing combatants and its similarity to the genteel Páshá, render it one of the most favourite games of the females of Bengal." ‡

Ashta-Kashti.

Ashtá-Kashti, like Das-Panchish, is chiefly favoured by ladies in Bengal. It is played on a board consisting of twentyfive squares, with sixteen small pieces, the moves of which are regulated by the throws of four large Cowries.

* *Ain-i-Akbari* (Blochmann's Translation Vol. I. p, 306.)

† Cowry is a kind of sea shell.

‡ *Op. Cit.* Vol. XV. p. 342.

Mongal Páthán.

The game of Mongal Páthán is "the representation of a battle between the Mongals and the Páthâns. The battle field is accurately drawn, consisting of 16 squares: within this figure is inscribed a large square. On one side is ranged the Mongol army in a triangular form, and on the opposite side the Pathán army. Each army consists of 16 pieces, the moves of which are regulated not by chance, but by the skill of players."

Bághbandi

The game of *Bághbandi* is somewhat similar to that of *Mongal Páthán*; but, instead of two armies, one side consists of a number of pieces representing goats and the other of one large piece representing a tiger. The moves of the goats are directed with a view to shut in the tiger, whence the name of the game. Both *Mongal Páthán* and *Bághbandhi* were, fifty years ago, highly popular with ladies in Bengal. * Now however, they are scarcely heard of in civilised society.

* "It is not a little remarkable that the females of the most unwarlike nation upon earth should delight themselves with the image of war. The fair ladies of England must, in this instance at least, yield to their dark sisters on the banks of the Bhagirathi, the palm of superiority. Which of the ladies we ask, who are so thoroughly initiated into the mysteries of the polka and crochet, ever conducted with consummate generalship a Mongal or a Patan army. * * * * It [the game of Mongol Patan] is less ingenious than chess, inasmuch as the moves of the pieces are uniform. The fascination, nevertheless, which these less complicated game produces on the softer sex is fully equal to that exerted on more robust minds by the pastime called *par excellence* royal." *Calcutta Review*, Vol. XV. (1851) pp. 341-342.

Billiards,

The game of billiards is gradually finding favour with the educated Hindu community. Billiard-tables are to be found at clubs frequented chiefly by Indians and at the houses of many well-to-do Hindus.

Out-door Games in pre-British times.

Tournaments would appear to have been rather common in ancient India. They were, however, confined to the military classes.

The game of *Chaugan* (hockey) was very fashionable during the Mongal Period. Abul Fazl expresses unbounded admiration for it. "Superficial observers" says he, "look upon this game as a mere amusement, and consider it a mere play; but men of more exalted views see in it a means of learning promptitude and decision. .... Externally, the game adds to the splendour of the Court, but viewed from a higher point, it reveals concealed talents" Pigeon-flying was in great favour. Akbar is said to have made it a study.

Animal fights were encouraged by the Imperial Court at Delhi, and used to attract large concourses of people. Akbar kept one hundred and one fighting deer. The manner of fighting of this animal as described in the "Ain-i-Akbari" is very interesting, its method of stooping down and rising up again being a source of great amusement. There were also buffalo-fights, goat-fights, ram-fights, cow-fights, and cock-fights. Betting was allowed, but regulated by Akbar according to the rank of the party betting. A commander of one thousand, for

instance, was allowed to bet six *mohurs* on a *deer*, but on cows and rams only two. A commander of ten, however, might bet only 8 rupees on a deer.*

Animal fights in recent times.

Buffaloe and ram-fights and pigeon-flying may still be occasionally witnessed in Bengal villages, but they have long ceased to be fashionable. Bul-bul fights were in great favour, about thirty years ago, in Calcutta. Those little birds used to be trained so as to wag their heads and fight with each other. The rich gentry of Calcutta were very fond of this pastime. Their suburban gardens used to be crowded for weeks together with spectators to witness it. It is, however, scarcely heard of at the present day.

Some common out-door games.

The commonest out-door games which the village youths in Bengal usually delight in are *Dándáguli* and *Hededudu*. The former is a kind of primitive bat-and-ball game with a large stick (*dándá*) for a bat and a small piece of wood, (*guli*) for a ball. In *Hededudu* the players are divided into two parties separated by a line. If a member of one of the parties can cross over to the side of the opposite party, touch a member of it, and return to his side, all in one breath, the man so touched is supposed to be "dead": if, on the contrary,he is caught hold of and detained till he takes another breath, he "dies"; so the game goes on until all the members of one of the parties "die", the opposite party being then

* *Ain-i-Akbari* (Blochmann's Translation) Vol. I. pp. 218 *et seq.*

the winner. Wrestling is a fashionable amusement in Rájputáná. In Bengal however, it is still popular only among the rural population.

European out-door games.

There have been more radical changes in out-door, than in in-door games. Cricket and, within the last ten years, foot-ball and tennis have been superseding such primitive games as *Dándáguli* and *Hededudu* which are gradually becoming restricted to the lower classes. Cricket came into fashion in Bengal with the foundation of the English Colleges. Bats, wickets and balls used to be supplied by Government to several of them, and cricket-matches between distant Colleges excited very great interest. Cricket has now become almost naturalised in India. A Hindu cricketeer lately won laurels in England. Foot-ball is also becoming very popular among students. Matches between Hindu and European teams are not uncommon.* Tennis is also being widely adopted by

* One now and then comes upon paras like the following in Calcutta newspapers :—

"A friendly match under the association rules was played yesterday evening between the Sova Bazar Football Club [composed of Hindus] and E. Co. of the Rifle Brigade. The game took place on the ground of the Sova Bazar Club, and attracted a large number of spectators. Both teams were very evenly matched, the ball travelling freely up and down the field. Both sides secured several advantages which they failed to improve upon, and each team in turn on several occasions threatened one another's goals. At half-time neither side had succeeded in scoring. The second half of the game was merely a repetition of the play before half time. Both sides did their utmost to score, but without avail, and when play ceased the game resulted in a draw, neither side having scored."

the Hindus. Even Hindu ladies are occasionally seen in Bengal to take part in it.

Jugglery and Magic.

There are professional athletes and jugglers belonging to the lower classes, troupes of whom go about the country exhibiting various feats and sleights of hand. "They convert a pice into a mango, a plum into a cowrie. They create an egg in an empty bag, and cause a dead goat to drink water. They can dance upon a rope, vomit fire, and sometimes thrust a knife, through a man's neck without injuring it—which may be reckoned their *chef d'œvre.* There are juggling women, who, unacquainted with the higher mysteries of the occult science, are only proficient in showing in their own gums a variety of teeth—teeth of monstrous size." There are transitional passages from jugglers such as these to expert magicians of a higher order such as have been recently described by Dr. Heinrich Hensoldt. †

According to him, "except raising the dead, not one of the miracles recorded in the New Testament is "half so wonderful as the feats performed by the average Yoghi." Dr. Hensoldt describes how he saw, "in the centre of one of the largest squares in Agra, a Yoghi plant a mango—an edible tropical fruit about the size of a large pear growing on a tree which

* *Calcutta Review* Vol. XV. p. 345.

† Noticed in the *Statesman* newspaper of Calcutta (Mofussil edition) Feb. 20. 1894

reaches a height of from forty to one hundred and twenty feet.

The Yoghi dug a hole in the ground about six inches deep, placed the mango in it, and covered it with earth......I was startled to see in the air above the spot where the mango had been buried, the form of a large tree, at first rather indistinctly, presenting as it were mere hazy out-lines, but becoming visibly more distinct, until at length there stood out as natural a tree as ever I had seen in my life—a mango tree about fifty feet high and in full foliage, with mangoes on it. All this happened within five minutes of the burying of the fruit......... and yet there was something strange about this tree, a weird rigidness, not one leaf moving in the breeze...... ...Another curious feature I noticed—the leaves seemed to obscure the sun's rays.........It was a tree without a shadow."

As he approached it, it faded, but grew clear again as he receded to his original position; but on his retreating beyond that point it again faded. "Each individual saw the tree only from the place where he stood." The English officers not present from the commencement saw nothing at all. Then the Yogi preached—so absorbingly that Dr. Hensoldt "seemed to forget time and space." He consequently did not notice the disappearance of the tree. When the Yoghi ceased speaking the tree had gone. Then he dug up the mango he had buried. This mango feat he saw five times. Before the palace of the Guicowar of Baroda "in the open air and in broad daylight," Dr. Hensoldt declares he saw for the first time—

he saw it thrice subsequently—the celebrated rope trick.* A Yogi, after preaching a most impressive sermon, "took a rope about fifteen feet long and perhaps an inch thick. One end of this rope he held in his left hand, while with the right he threw the other end up in the air. The rope instead of coming down again remained suspended even after the yoghi had removed his other hand and it seemed to have become as rigid as a pillar. Then the yoghi seized it with both hands, and to my utter amazement, *climbed up* this rope suspended all the time, in defiance of gravity, with the lower end at least five feet from the ground. And in proportion as he climbed up it seemed as if the rope was lengthening out indefinitely above him and disappearing beneath him, for he kept on climbing till he was fairly out of sight, and the last I could distinguish was his white turban and a piece of this never-ending rope. Then my eyes could endure the glare of the sky no longer, and when I looked again he was gone." As an Oriental traveller and student, Dr. Hensoldt concludes that Hindoo adepts have "brought hypnotism to such a degree of perfection that, while under its influence our senses are no longer a criterion of the reality around us, but can be made to deceive us in a manner which is perfectly amazing."

Feats of magic are not confined to the Hindus. Mahomedan experts are also occasionally met with. About

* This trick has been described by several travellers. We cannot however, vouch for the accuracy of the descriptions. For a description of the sword-swallowing trick, see Forbes, "Oriental Memoirs" Vol. II. pp. 515-517.

thirty years ago one Hussein Khan showed some fine tricks in Calcutta :

"He made a heavy silver English watch" says Bhola Nath Chandra "held fast within our own clutches, disappear by exorcism without our perceiving in the least the process of transformation from its materialistic condition. The watch belonged to a Gosain, who regretted its loss with the most rueful countenance. He was at last told where to find it out, and driving home in a gharry, picked it from one of his puja-vessels, and joyfully returned with it back to the company. Subsequently, Hussein Khan showed many such feats—producing on one occasion cheques and notes from the Bank of Bengal before a nautch party, and, on another, grapes from Cabul within an hour, and champagne from the Great Eastern Hotel while driving in a carriage. The last operation of his Hazrat in our memory, was the disappearance of a brass tumbler from our hands that returned again after some ten minutes into the hands of a friend (the late Babu Romanath Law) then sitting by us." *

* "Life of Rájá Digambar Mitra" pp. 276-277. Hussein Khan's feats have been related to us by a highly creditable eye-witness.

CHAPTER IV.

FOOD, DRESS, ORNAMENTS &c.

Food

The primitive Indo-Aryans resembled the Modern Europeans, especially the English, in many of their tastes and habits. The ancient Hindus appear to have been very fond of roast meat. Shoulders and rounds of beef and buffalo-meat were boiled, roasted on spits, or fried in clarified butter and sprinkled over with salt and pepper. Even little birds were roasted on spits in preference to being fried or curried. Curries there were; but they occupied quite a subordinate place in the bill of fare at feasts. Venison was liked in a boiled state, dressed in large haunches.* There were cakes of various descriptions prepared with milk, sugar, ghee, and flour, some of which have survived.

* Rájendralála Mitra, "Indo-Aryans" Vol. I, pp. 426, *et seq.*

With the progress of their morals, the Hindus came to look upon the taking of animal life with disfavour about the time of Gautama the Buddha. Buddhism, and afterwards Vaishnavism forbade animal food. Owing to the influence of these two cults, nearly half of the higher-class Hindus are at the present day almost absolute vegetarians, the other half look upon several kinds of the much-prized meats of ancient India as forbidden food. As a body, the upper-class Hindus are practically vegetarians ; and the Hindu dietary of the present day is much richer in vegetable dishes and in cakes and other confectionaries than the dietary of the ancient Hindus. Meat is usually taken in the form of curries. The Mahomedans introduced various rich dishes * which are occasionally indulged in, especially on festive occasions. In recent years various English dishes such as soup, roast, chop and cutlet have been introduced into the bill of fare of the Neo-Hindus, especially those of the radical type. The fact that Hindu shops for the sale of chops and cutlets have been started in various parts of Calcutta, testifies to the popularity which they have already attained among the Hindus in that city.

* Such as Qualya, Dampukht &c.

Abdul Fazl classifies cooked victuals under three heads :—

First.—Those in which meat is used.

Secondly.—Those in which meat and rice, &c., are used.

Thirdly.—Meats with spices.

He gives ten recipes of each kind, and from each recipe two to four dishes are obtainable.

(*Ain-i-Akbari* Blochmann's Translation Vol. I. p. 59).

Drink &c.

Water is the usual drink of the Hindus. Effervescing non-alcoholic beverages have within the last twenty years become highly popular. In larger towns there is scarcely a street-side refreshment stall without bottles of lemonade and gingerade, and in railway stations they are in very great demand.

Ice came into use during the reign of Akbar in A. D. 1586. It used to be brought by land and water from the district of Panhan in the northern mountains about 100 miles from Lahore. The average price of ice at Agra in Akbar's time was about $3\frac{1}{2}$ annas per seer Abul Fazl says, that "all ranks use ice in summer; the nobles use it throughout the whole year." *

At present the price of ice, which is sometimes as low even as half an anna per seer in Calcutta, places it within the reach of the middle class in the larger towns.

The great majority of the higher caste Hindus do not indulge in stronger stimulants † than *pán* and tobacco. Pán ‡ is taken by both the sexes, especially after meals. The English influence has diminished its consumption to some extent as it is interdicted in offices, schools and colleges; and those who have been longest and most intimately in English contact have given it up altogether.

* *Ain-i-Akbari*, Blochmann's Translation Vol. I. p. 56.

† With regard to the prevalence of alcoholic drinks see Book II, Ch. IV.

‡ Betel-leaf with lime arecanut, catechu, &c. In moderation it is said to be promotive of digestion, and otherwise conducive to health.

Tobacco.

Tobacco, which is now so successfully naturalised, and is universally used throughout India, was introduced in the reign of Akbar. It is interesting to note that, drunkard as he was, Jehangir published an edict against the use of tobacco, which he considered very harmful.

Jehangir says in his "Memoirs":—

"As the smoking of tobacco had taken a very bad effect upon the health and mind of many persons, I ordered that no one should practise the habit. My brother Shah Abbas, King of Persia, also being aware of its evil effects, had issued a command against the use of it in Iran."*

Tobacco is usually smoked in *hookás*. Towards the end of the last century even Europeans were greatly addicted to the use of hookás. "Gentlemen instead of their perusal of a daily paper 'furnishing the head with politics and the heart with scandal' indulged themselves with the hooká's rose-water fumes while under the hands of the perruqier in the days when pig tails were in practice." Grand Pre states of the hooka-burdar:—"Every hookah-burdar prepares separately that of his master in an adjoining apartment, and, entering all together with the dessert, they range them round the table. For half an hour there is a continued clamour, and nothing is distinctly heard but the cry of silence,

* *Wakiat-i Jahangiri*, Elliot's "History of India," Vol. VI. p. 357. Asad Beg's narrative of the first introduction of tobacco into Akbar's Court is interesting. Akbar expressed great surprise, and examined the tobacco which was made up in pipefuls. See "History of India" Elliot's Vol. VI. pp. 166-7.

till the noise subsides, and the conversation assumes its usual tone. It is scarcely possible to see through the cloud of smoke which fills the apartment. The effect produced by these circumstances is whimsical enough to a stranger, and if he has not his hookah he will find himself in an awkward and unpleasant situation. The rage of smoking extends even to the ladies; and the highest compliment they can pay a man is to give him preference by smoking his hookah. In this case it is a point of politeness to take off the mouthpiece he is using, and substitute a fresh one, which he presents to the lady with his hooká, who soon returns it. This compliment is not always of trivial importance; it sometimes signifies a great deal to a friend and often still more to a husband."*

At present the hooká is tabooed in the English society, and in that small section of the Hindu society which is most governed by English ideas. Among the remainder of the Hindu community, it holds its own, though even there, it is to some extent superseded by cigars, cigarettes and pipes. The hooká is the least injurious, as it is unquestionably the pleasantest, way of smoking. It has, however, the great disadvantage of not being conveniently portable; and in these days of constant locomotion the disadvantage is very serious.

Clothing in pre-Mahomedan times

There can be no doubt that the higher class Hindus in pre-Mahomedan times used made dresses The sculptures at Sán-

* *Calcutta Review*, September, 1860, p. 210.

chi, Amarávati, and Orissa, show sewed dresses, resembling the *chápkán* and *jámá* of the present day. Such Sanskrit names as *kanchuka* and *kanchulika* for made up clothes are confirmatory of this evidence. Indeed, the occurrence of the words *suchi* (needle) and *sivan* (sewing) in the Rigveda would indicate the existence of sewn habiliments in the early Vedic period. Well-dressed females and elegant well-made garments are referred to in various passages in the Rigveda.*

in Mahomedan times.

There can be little doubt, however, that with the establishment of the Mahomedan rule made dresses (*chápkán*, *páyajámá*, *&c.*,) came into more general use than before. The fact that such clothes are in more habitual use among men and women in the North-West, within the sphere of the influence of Delhi and Agra, than in any other part of India, and the fact of the majority of Indian tailors (at least in Bengal) being Mahomedans, are in favour of this view.† In Bengal, in Máhárashtra, and in the Deccan, the ancient *dhuti* and *chádar* still form the essential components of the national custume. The practice of wearing a *chápkán* when going to Courts, though not

* R. V. IV., 3, 2; x., 71, 4: V. 29, 15 &c.

† Hiouen Thsang, the Chinese traveller in India (about the middle of the 7th Century) says, that in North India "where the wind was cold, people wore close-fitting garments,' There is some doubt from this as to how far the general use of such garments in North-Western India is attributable to Mahomedan influence.

originating with, was certainly extended in Mahomedan times. *

Change during British Rule.

The most widely adopted Western addition since the establishment of the British Rule to the male custume of the Hindus is the coat which is sometimes cut in English fashion, but is more generaly buttoned up to the neck. Socks also have been coming largely into use. Some have adopted the English dress *in toto*. Some have adopted it without its headgear, some without its neck appendages, and some without both. In any large Hindu assembly, there is witnessed an almost bewildering variety of costumes. There is the English dress in all its integrity, as well as in various fanciful modifications; there is the *chápkán* with or without *chogá*; and there is the national *dhuti-chádar*, sometimes with shirt, sometimes with coat, and sometimes without either. Some sit with heads covered by turbans or caps of various descriptions: Some sit with hats or caps in hand or close by; and some dispense with a headgear altogether.

Female dress.

"It is not to be denied," says Rájendra Lála Mitra "that it is difficult to decide authoritatively the exact form of the female dress which prevailed from twelve to twenty centuries ago in India, but after a careful survey of the sculptures extant and the notices to be met with in ancient Sanskrit

* *Dhuti* is a long piece of cloth usually made of cotton, which is wrapped round the middle, and tucked up between the legs. In Bengal, a part of it hangs down below the knees. *Chádar* is a long piece of cloth, which is worn over the shoulders. *Chápkán* is a sort of tunic.

records, I am disposed to believe that the bulk of the women of the country wore the *sári*; that all who could afford it added thereto a bodice; that respectable women put on a jacket *(áñgiá)* over the bodice, and covered the whole with a scarf or *chádar*; and that some habited themselves with the petticoat (*ghágrá*) or the drawers *(páyajámá)*, along with the bodice, the jacket, and the scarf. These dresses were, however, not common all over India, for local peculiarities and custom undoubtedly gave preeminence to some of them over others at particular places: but they were known and more or less in use by the people in every part of the country." * There has been less change in the female than in the male attire, except perhaps in Bengal where the bodice and the jacket almost unknown before have lately been coming into fashion.

Shoes and boots,

Shoes and boots were amongst the common articles of the ancient Hindu dress. The grammarian Pánini mentions a variety of boots which was tied at the ankle. "They [the Indians,]" says Arrian "wear shoes made of white leather, and these are elaborately trimmed, while the soles are variegated, and made of great thickness." † Shoes with an upturned front are in general use all over India. They have, however, to a large extent, been lately supplanted among the educated classes by

* "Indo-Aryans" Vol I. p. 199.

† "Ancient India as described by Megasthenes and Arrian" (Translated by J. W. Mc. Crindle) (1877) p. 220.

boots and shoes of English make. Whether ladies in ancient India used to wear shoes and boots is not exactly known. At the present day those few among them who have been most affected by the English contact favour English shoes and boots.

Ornaments.

The most noticeable change in ornaments in recent years has been among the small class of ladies who have been influenced most by the Western contact. The decorative taste of the older class ladies has been formed as much by æsthetic as by prudential considerations. In their ornaments, therefore, weight and purity of the metal are combined, as far as possible, with elegance. Such combination, however, is not always possible; and the cumbersome old-fashioned ornaments not harmonising well with European taste, which affects elegance more than substance, have been either discarded or replaced by lighter, better finished, though less pure articles. The introduction of European ideas of propriety has probably had something to do with the rejection of the various leg and foot ornaments the rhythmic jingle of which still delights the ears even of the sterner sex who have not yet received the full light of Western civilisation. To the adoption of jackets of which the sleeves come down very nearly to the wrist may similarly be attributed, at least in part, the disuse of ornaments worn on the upper portion of the arm. Bangles and necklaces, however, still hold their own, are met with in great variety, and have even been adopted, to some extent, by Anglo Indian

ladies. Nose-ornaments and heavy ear-ornaments are becoming generally obsolete in civilised society in Bengal, as are also waist-ornaments especially amongst those whose civilised drapery does not admit of their exhibition to advantage. *

Furniture.

The Hindus have from ancient times had stools, chairs and benches. They are, however, low, being adapted for squatting, and are not habitually used. There is scarcely any furniture in an ordinary Hindu sitting room; a carpet spread over the floor or on a wooden platform and covered by sheets, a few very stout pillows to recline against, and two or three *hookás* are about all its appurtenances. Recently, however, tables, chairs, sofas and other articles of European furniture have made their way into well-to-do Hindu households in larger towns; and a few of these are to be met with furnished entirely in the English style. Hand fans have been in use in India from very ancient times. Recently however, they have, to some extent, been superseded by swinging *punkhás*.

Domestic utensils &c.

In the Rigveda, there are references to skin and iron or golden vessels. † The Hindus of the time of the Manusamhitá, used

* The fact of many ornaments gradually going out of fashion, and the deterioration in quality of others, as regards purity of metal, are considered by some to be signs of increasing proverty.

† R. V. VI. 48, 18 &c; V. 30, 15. In the last passage, the word in the original is "ayasmaya" which has been interpreted by Sáyana to mean "golden."

vessels made not only of copper, iron, brass, pewter, tin, and lead, but also of gold and silver*. From the carved representations of cups and goblets of various shapes and sizes at Sánchi and Bhuvaneswara, it may be inferred that they were in use among the upper class Hindus, though there is considerable doubt about the material they were made of.

One of the effects of the English contact has been the replacement, to some extent, of earthen cooking utensils by iron ones, and of metallic vessels and plates by china and glass-ware.

Conveyances.

In the Rigveda, the construction of chariots is often referred to and the skill shown in the composition of hymns is compared in various passages to the art of the carriage builder.† In one passage we are told, that "the expert charioteer stands on his chariot and drives his horses wheresoever he will. . . The horses raise the dust with their hoofs, and career over the field with the chariots, with loud neighings."‡ In another, the car is described as provided with three benches, and three wheels, and "embellished with three metals." In the Rámáyana and the Mahábhárata, chariots are frequently described. They would appear to have been in requisition chiefly on the battlefield; and as conveyances, were used only

* Manu V. 112-114.

† Muir's "Sanskrit Texts," vol. V (1884), p. 464.

‡ R. V- VI. 75, 6-7. In the Vedic period, horses do not appear to have been used for riding purposes.

by great chiefs and nobles. Elephants* have since the time of the Rigveda maintained their reputation as conveyances fit only for kings and nobles. The ordinary vehicles of the middle class people on land were, as they still are, in rural India, covered two-wheeled carts † drawn by a pair of bullocks, palankeens, and horses. In former times, horses would appear to have been ridden by respectable ladies. In the Kathá Saritságara, ‡ a Bráhman named Devasvámin says : "One day I mounted a mare, and went with one servant to my father-in-law's house to fetch her [his wife]. There my father-in-law welcomed me ; and I set out from his house with my wife, who was mounted on the mare, and had one maid with her." Riding by ladies is not now considered respectable except among certain classes of the Mahrattas. Mahratta ladies ride like men, and do not use side-saddles. Speaking of the Mahratta ladies of the families of Sindhia and Holkar, Malcolm says : "The management of the horse always constitutes part of their education." Bhìmá Bái, the daughter of Jaswant Row Holkar, rode with grace, and few surpassed her in the management of the spear.§

English carriages were introduced in the reign of the Emperor Jehángìr. "I marched," says Jehángír in his "Memoirs," "in sound health from Ajmìr in a European

* In R. V. IV. 4, 1, A king is mentioned as riding on an elephent.

† These are described in the *Mrichhakati*, and figured in the Amarávati sculptures.

‡ *Op. eit.* (Tawney's Translation, Vol. II. p. 616)

§ "A Memoir of Central India" Vol. II. (1823), pp- 120-121.

carriage drawn by four horses, and I ordered several nobles to make up carriages similar to it, and attend upon me with them." * English-fashioned carriages, in some cases modified to suit the Indian climate, and rail and tram cars have, within the last forty years, replaced, to a great extent, the indigenous carts and palankeens.

* *Wákiát-i Jahángri.* Elliot's "History of India" Vol. VI. p. 347.

BOOK IV.

INDUSTRIAL CONDITION.

CHAPTER I.

AGRICULTURE.

Broad features of Indian Rural Economy.

Indian rural economy is marked by two broad features which it is desirable at the outset to place clearly before our readers. First, it is no exaggeration to say that nearly the whole of the rural population lives by the cultivation of the soil, a statement which can hardly be made of any other country in the world. The Famine Commissioners estimate that 90 per cent of the rural population live more or less by agriculture. Secondly, Indian agriculture is pre-eminently a *petite culture* and forms the backbone of the Indian village community of which the cultivator or ryot is the unit. The village contains no doubt the

blacksmith, the carpenter, the weaver, the potter and other handicraftsmen besides the ryot, but all live for his benefit and are supported by the produce of his land. Take away the unit—the ryot—the whole village organisation breaks down. Various causes are now at work tending to draw the ryot from his land, to increase in fact the non-agricultural or landless class; but the love of the ryot for his small plot of land and homestead is so great that generations must yet elapse before this tendency will have any appreciable effect in disturbing the ancient rural organisation of India. The ryot clings to his district with a tenacity which it is extremely difficult for an outsider to realize. Hence it is that the system of emigration devised by the Government with the best of intentions to draw half-starved peasants from congested areas to sparsely populated ones, has not met with that amount of success which the system deserves.

Simplicity of Indian agriculture.

The systems of agriculture pursued in different parts of India vary infinitely in detail, but they all agree in one broad aspect,—simplicity. The implements of cultivation from the plough to the sickle are extremely simple in their construction and in the mode of their working; they are all manufactured, changed, and repaired in the village without any assistance from skilled town-mechanics. The motive power of the ryot, the inevitable bullock, supplemented here and there by the buffaloe, excepting in Sindh and the western districts of the Punjab where camels replace the bullock, is easy to manage,

to breed, to feed, to doctor, and to buy and sell. The various operations of husbandry are equally simple. Ploughing in the English sense of turning up a furrow is unknown and perhaps unnecessary in this country, where it is a much simpler operation which turns up no furrow but merely scratches the surface soil, and requires no complicated implement like the English plough or skilled workman like the English plough-man. So on with the rest.

General aspects of Indian agriculture.

The great problem of agriculture in India is the storing of water in the soil. In this respect it differs totally from agriculture in Europe where the drainage of surplus water is the main difficulty. This essential requisite of Indian cultivation, except in localities where natural means are sufficient, is supplied by wells, as in the Punjab and the Deccan, by tanks and *bandhs*, as in the Karnatic and the uplands of Bengal, by inundation channels, as in Sindh and parts of Behar, and by terraces cut on every hill side, which together water a far larger area than is commanded by the Government canals and are more adapted to the soil, climate and social conditions of the people than the latter. But all these means of irrigation taken together do not command more than 13 per cent of the total cultivated area. In a country like India where rainfall is capricious, both in its amount and distribution, and where the conservation of water is the first and most essential requisite of cultivation, the proper control of the water-supply becomes a question of paramount importance, more so than the introduction of

labour-saving implements, chemical manures and scientific methods of cultivation. Manures are copiously applied to his valuable crops by the ryot, who knows fully well the forcing power of his applications; but his scope in this direction is limited both by the number of manures at his disposal and their quantity. Scientific agriculture can help him more in this than in any other department of his profession. Rotation of crops in its European sense is unknown and not at all a necessity in the vast rice-growing deltas of the great Indian rivers. But at the same time the exhausting effects of cropping a land with the same crop from year to year and the recuperative power of fallows are widely recognized. From the famous 'black' or 'cotton' soil of the Deccan, which is wonderfully fertile and retentive, and the alluvial soil of the river deltas, annually rejuvenated, to the deserts of Sindh and Rajputana, the soils present an infinite variety; and the ryot has adapted his cultivation to these varying conditions with a skill which only the accumulated experience of ages can generate in persons who follow a hereditary calling. The plough-cattle of India speaking generally are not such undersized, ungainly and inefficient creatures as foreigners have often described them. Considering the soil, the climate, and the other conditions under which they have to work, the cattle are well adapted to the purposes of the ryot. No doubt there are local breeds such as the Nellore cattle of Madras, the Amrit Mahal

of Mysore and the trotting bullocks of Jubbulpore, which in point of breeding, beauty, and the special purposes for which they are bred can stand comparison with any cattle in the world. But even the much condemned ordinary plough-cattle of the country, if not carefully bred, are well looked after and well fed so far as the poor ryot's means allow. His means however, which are never very affluent, fall to their lowest ebb in seasons of scarcity; and his cattle have to share with him the pinch of penury and starvation which claim as victims thousands and thousands of their number annually. Add to this the heavy mortality due to various forms of cattle diseases which follow in the wake of scarcity, and the causes of the insufficiency and degeneracy of Indian cattle become apparent. Mr. Hume, a late Secretary to the Government of India in the Department of Revenue and Agriculture, estimates 'the average annual loss of cattle in India by preventible disease at 10 million beasts worth 7½ millions sterling.''

Principal crops.

Having thus summarised the general aspects of Indian agriculture, and adverted to the three main impediments from which it suffers, it may be useful now to give a brief account of the principal crops of the country. For convenience of treatment, the crops are divided into, (1) *Food crops*, and (2) *Industrial crops*. Of these some are grown principally for home consumption, while others are grown for export. Of the food crops grown for home consumption,

the chief are Rice, Millets, Pulses, Oilseeds and Sugar-cane; of those grown for export, the most important is Wheat. Of the Industrial crops, Cotton, Jute, Indigo, Opium, Coffee and Tea are grown for export, and Tobacco and Cinchona for home consumption.

Rice.

Rice has been cultivated in India from time immemorial. Competent observers on Indian Botany assert—and their assertion accords with the prevailing opinion of the people of the country,—that *uri dhán*, which grows wild all over Bengal and other parts of India, is the parent stock from which all the cultivated varieties of Indian paddy have sprung. Philological evidence has been brought forward to corroborate or controvert the Botanical evidence, but this is not the place to discuss the matter.

The Famine Commissioners estimate the rice-eating population of India (excluding Burma) at 67 millions, or over one-third of the whole population. The proportion is highest in Bengal, being 43 out of 69½ millions, and Madras stands next with 10 out of about 31 millions.* In Lower Burma, out of a total cultivated area of 5,664,987 acres, in 1891-92, as many as 4,662, 897 acres, or 82 percent were under rice. In Bengal, out of a total cultivated area of 55,407,360 acres, in 1889 90, as many as 41,618,560 acres or 75 per cent were under rice. For Madras, in 1891-92, the total cultivated area was 28,823,826 acres, out of which 5,771,182

* These population-figures are from the Census of 1881.

acres or over 23 per cent were under rice. Throughout the interior of the country, rice cultivation occupies but a subordinate place. In the North Western Provinces and Oudh, the total cultivated area in 1891-92 was 36,797,272 acres, of which 7,139,042 acres or slightly over 19 per cent were under rice. In Punjab, the acreage of rice is 722,511, or slightly under 3 per cent, out of a total acreage of 25,779,366 acres. In Bombay, the acreage of rice rises to 6 per cent, or 2,299,593 acres out of the total cultivated area of 36,438,830 acres. In the Central Provinces, the percentage rises still higher, namely 24, or 4,292,480 acres out of 17,786,399 acres of total cultivated area. Taking India as a whole, out of a total cultivated area of 221,583,646 acres, in 1891-92, 68,843,662 acres or 31 percent were under rice.

The conditions under which rice is cultivated are so exceptional, that the areas in which it forms the staple food-crop may easily be defined. The Deltas of the great rivers of Lower Burma and Bengal; the Deltas of the Godavery, the Krishna and the Caveri; the long narrow strip of land fringing the coast; and the lowlands of Travancore, Malabar, Kanara and Konkan present all the conditions of successful rice cultivation, and constitute the great rice growing area in India. If we except this area, rice may be said to be a subordinate, if not a rare crop throughout the remainder of the country; in fact, Millets take the place of rice in the interior (excepting Assam). Sir William Hunter writes.—"Taking India as a whole, it may be broadly affirmed that the staple food-grain is neither rice, nor wheat but millet."

The conditions of rice-cultivation as have already been stated are quite exceptional. It stands in stagnant water from transplantation time to almost harvest time. In some Bengal districts, pre-eminently Dacca, a variety of paddy is grown which will keep its head above 20ft. of water "and has a remark able power of growth, often shooting up to the extent of 12 inches in the course of 24 hours as the inunda tion rises." The two principal varieties are, (1) *aus* which occupies the field from April-May to August-September, and (2) *aman*, which occupies the field from June-July to November-December. There is a third (3) variety *Boro* which holds a very subordinate place except in the Eastern districts of Bengal, especially Dacca. This variety occupies the field from January to April. Considered by area and consumption, the most important variety by far is the *aman*, as it covers more than three-fourths of the rice-growing area. Rice-straw after the separation of the grains forms a very important and valuable fodder. For feeding cattle it is chopped into bits of 2 to 4 inches long and mixed with rapecake, dry or in a state of emulsion with water, and also with the husk of pulses. It is also given to themuncut. Another economical use for which it is highly valued is the thatching of ryots' cottages.

Wheat.

The origin and early history of wheat cultivation in India is as much enveloped in mystery as that of rice. There are reasons to believe that it is as old in India as in any other part

of the world. Spelt, a coarse variety of wheat cultivated in this country as well as in Europe, is supposed to be the direct descendant of the parent stock from which all the cultivated varieties have originated. De Candolle, the greatest authority on the origin and history of cultivated plants, considers Mesopotamia to have been the original home of wheat whence it has spread both East and West. But the evidence on the subject is not conclusive.

The importance of wheat cultivation dates from 1869, in which year the Suez Canal was opened reducing the time of transit from India to Europe from three or four months to as many weeks. The importance was further emphasized in 1873, on the 4th January of which year the export duty on wheat was taken off within the last twenty-two years, the export trade in wheat has gone on steadily increasing without any serious fluctuation. The total quantity of wheat exported rose from 637,099 cwt. in 1871-72 to 1,755,954 cwt. in 1873-74 and to 30,306,989 cwt. in 1891-92 To feed this steady increase of export there has been a steady increase in the area devoted to wheat cultivation which is returned at 19,573,982 acres in 1891 92. This includes 1 million acres as the estimated wheat acreage of Bengal. Taking by the provinces, in 1891-92, the Punjab grew 6,767,893 acres of wheat, or 26 per cent of its total cultivated area, the Central Provinces 3,957,260 acres, or over 22 per cent of its total cultivated area; the North Western Provinces and Oudh 4,757,397 acres, or 13 per cent of the total cultivated area; and

Bombay 2,299,593 acres, or 6 per cent of the total cultivated area. Other privinces grow wheat, but to a very small extent; and hence separate acreages for them are not given here. From the above figures it will be clear, that wheat flourishes most where rice does not, and that the great wheat producing area embraces the whole of Northern India up to the head of the Gangetic delta and, in Southern India, the whole of the table land above the Ghats.

Wheat does not form the staple food of the people of the country and is grown principally for export. It has been estimated that the Indian consumption of wheat does not exceed 6 million tons. Contrast this with the figures for rice, namely 25½ million tons, and the comparatively less importance of wheat consumption becomes at once apparent.

The Punjab, which has the largest area under wheat, exports comparatively the smallest amount; so that in the Punjab wheat forms an important article of food. On the other hand, the Central Provinces, which stands next to Punjab in the percentage of wheat producing area, grows wheat almost exclusively for export. The great wheat producing countries in the world are the United States with 45,000,000 quarters as its gross annual outturn; India, France, and Russia with 30,000,000 to 35,000,000 quarters each. The largest consumer of Indian wheat is the United Kingdom, which, in 1891-92, imported from India 12,345,453 cwts. out of the total Indian export of 30 million cwts. Indian wheats are more glutinous than English ones and not suited for

bread-making excepting with a fair admixture of soft English wheats. They are however said to be very well suited for macaroni for which purpose a demand for them has sprung up in Italy. The questions of adulteration and trade refraction need not be mentioned here.

Wheat is classed as a winter or *rabi* crop; the sowing commences from the end of October and the harvesting finished by the end of May. Where facilities exist it is always irrigated. The varieties cultivated are too numerous to be detailed here, but they are gouped under the general headings of hard and soft, red and white, and bearded and beardless. Heavy clay loam is best suited for its growth. There is a variety of wheat grown in local areas in which the husk does not fall off from the grain but which has to be husked like paddy for separating the grain from its outer-coat. The average yield of wheat per acre has been variously estimated. Sir William Hunter puts it at 13 bushels per acre in the Punjab, as compared with an average of 15½ bushels per acre for the whole of France. If we include the whole of India, the present average yield will not exceed 9 bushels per acre. Contrast this with the average yield of an English acre, namely 30 bushels, and the possibility of improvement in wheat cultivation becomes at once apparent. Wheat straw in the form of *bhusa* or *poal* is largely used as cattle food, but not for thatching.

Millets.

As rice forms the staple food crop grown for home consumption in local areas as Bengal, so millets form the staple food crop in

those localities where rice is not cultivated. In fact the millets are the poor's grains, that is, the food of the majority of the Indian people. The total area of land under millets, in 1888-89, has been estimated at 35,154,468 acres, of which Bombay has 15, Madras $11\frac{1}{2}$, the N. W. Province $1\frac{4}{5}$, the Punjab 5, and Berar over 2 million acres. In Bengal Proper and Orissa, millets are seldom cultivated, but in Behar they are more common. The two most common kinds are the great millet or guinea corn (*Sorghum vulgare*) known as *joar* or *jawari* in Northern India, and *cholum* in Madras; and the spiked millet (*Pennisetum typhoidem*), known as *Bajra* in the North and *Kamba* in the South. Besides these there are five other cultivated species which hold a very subordinate place in acreage. Of these *ragi* (*Eleusine corocana*), takes the first place in Mysore where it is the staple food grain. Millets are classed as *kharif* or autumn crop as opposed to wheat classed as *rabi* or winter corp.

Minor cereals : Maize.

Indian corn or Maize (*Zea mays*) is the most cosmopolitan of all cereals, being cultivated throughout the world. In India, for instance, it grows in the swamps of Eastern Bengal, in the sands of Rajputana, and in the colder regions of the Himalayas. Some varieties are grown only as green crops, which, when ripe, are unfit to be eaten, while others are grown for the ripe grains only. It is a *kharif* crop, though it is not unusual to come across *rabi* maize, which is sown in autumn, and reaped in

spring. In Upper India, only the ripe grains are made into flour and then into bread. In other parts, the green cobs are eaten after being roasted or fried. The straw reaped green is a good fodder, but useless in the ripe state. The area of maize cultivation has not been separately given and can hardly be determined. Many ryots grow it as a vegetable in small plots around their homesteads. Dr. Watt, in his Economic Dictionary, says that the maize area of India closely corresponds with that of wheat. Of the different provinces, Punjab has the largest, and Bengal and Madras the smallest area under maize.

Barley.

Barley is grown in Northern India, especially the North-Western Province which has the largest area under the crop. The total area under barley has been estimated at over 7 million acres, excluding Bengal and the Native States from which reliable statistics can not be had. It is grown either alone, or mixed with pulses as gram, peas, or lentils. The seed is sown in October-November and the harvesting is complete in April-May. It is a *rabi* crop like wheat, but is grown chiefly for home consumption, very little being exported. In North India a curious practice prevails in some places of cutting the whole crop down to the ground when about to flower and feeding the cattle with the green stuff. The barley is allowed to grow again from the green stubble left on the land and, strange to say, the new crop is not any the worse for this treatment. Until very lately Indian maltsters used

to import barley from Persia, but now the barley used by the Indian brewers is entirely grown in this country. English maltsters have complained of Indian barleys not germinating freely for malting purposes, but the grounds of complaint have not yet been closely examined or established. But the use of the grain in many parts of India for the preparation of a kind of spirituous liquor or beer has long been known. Barley meal, known as *chhatu*, is a common food amongst the lower classes in Northern India.

Oats.

Oat (*Avena sativa*) is a recent introduction into Indian agriculture under English auspices. Its cultivation is restricted to Northern India where it is principally grown, in districts where horse-breeding is carried on, as food for horses. In the dietary of horses in India, gram usually takes the place of oats in England.

Pulses.

The pulses of various sorts form very important articles of food. Next to rice and millets, the pulses have the greatest consumption. They are mostly consumed in the form of a thick soup known as *dal* formed by boiling split pulses This soup is seldom taken alone, but used as an accompaniment of the staple article of food. The area under the heading "Other food grains including pulses" given in the Statistical Returns of 1891-92 is 76,452,323 acres, of which fully one-half, if not more, may fairly be assumed as under pulses alone. Dr. Watt in the Colonial and Indian Exhibition Catalogue puts the total area under pulses at 48,000,000

acres ; but it must be remembered, that lands which grow pulses are generally twice cropped, in other words pulses are taken as catch crops. The principal varieties of pulses grown are the common gram *(Cicer arietinum)*, *arhar* *(Cajanus indicus)*, lentils *(Lens esculenta)*, *mug* or *mung* *(Phaseolus Mungo)*, *mash-kalai* *(Phaseolus radiatus)*, the common pea *(Pisum sativum)* and *khesari* *(Lathyrus sativus)*. The pulses are all *rabi* crops excepting *arhar* which stands in the field a full year.

Oil seeds.

The principal varieties of oil seeds cultivated in India are rape or mustard, linseed, *til* or gingelly and castor-oil. The total area under oil seeds, in 1888-89, was 7,381,811 acres; but as this did not include Bengal, for which reliable statistics are wanting, and as the area in Bengal under linseed alone in the same year was estimated at 1,500,000 acres, the total area under oilseeds for the whole of India may be estimated at 9 million acres. The total area in 1891-92, excluding Bengal, has been returned at 8,498,058 acres, to which if we add 2 million acres for Bengal the total comes to over 10 million acres. The increase in acreage has been due to an impetus given to export trade in oil seeds, especially to France. In 1879-80, the total quantity of oil seeds exported was 7,091,469 cwt. valued at Rs. 4,68,58,927, and the export steadily went on increasing till in 1889-90, it rose to 15,794,742 cwt. valued at Rs. 10,62,75,533. Mr. O'Conor says in his review of the sea-borne trade for 1884-85, "This trade has developed in recent years

into one of the first importance, exceeding greatly the trade in wheat, rice, jute, indigo, or tea, and being exceeded only by cotton and opium". Mustard or rape is a *rabi* crop harvested in January, linseed a *rabi* crop harvested by the end of April or beginning of May ; *til* or gingelly is a *kharif* or autumn crop harvested in September-October. There is a variety of *til* which is grown as a spring crop and harvested just before the commencement of the rains.

Sugar.

Coarse sugar or *gurh* is produced from sugarcane (*Saccharum officinarum*) and date palm (*Phœnix sylvestris*). The cultivation of sugarcane and date-palm in India and the use of *gurh* (coarse sugar) are mentioned in old Sanskrit works such as the *Manusamhitá, Charaksamhitá* and *Susruta*. There is evidence to show, that *gurh* was known and produced in this country long before the Christian era Botanical evidence favours the idea of India being the home of the parent stock from which the cultivated varieties of sugarcane have been gradually evolved.

Gurh is one of the cheapest luxuries which the poor of India have. So far as the consumption among the native population of the country is concerned, refined sugar is at a great discount. It is wholly wanting in that flavour and sweetness which make *gurh* palatable to them. Their prejudices against refined, or as it is often called loaf sugar, are due not merely to the impression, right or wrong, that bone is used in its manufacture, but also to the fact that it does not come up to their standard

of palatableness. Of late years the export trade in sugar has declined. But the areas of sugarcane cultivation quoted below will show that there has been no decline in it, but rather expansion. Of the two chief sugar-producing regions in India, in 1847-48, Bengal had 223,794 acres and N. W. Provinces 595, 441 acres under sugar cane, and, in 1887-88, 282,000 acres and 788,000 acres respectively. Messrs Thomson and Mylne, the enlightened and enterprising Zemindars of Behea, in Bengal, have estimated the area under sugar plants at 2½ million acres, the outturn of coarse-sugar per acre at 1 ton, and the total outturn at 2½ million tons. The total area of sugarcane for the whole of India including Bengal and the Native States, in 1887 88, has been put in Dr. Watt's Economical Dictionary at 2,107,200 acres; and the statistical returns for 1891-92, which do not include Bengal and the Native States, have put it at 1,940,332 acres, to which if we add the areas for Bengal and Native States and the areas under sugar-date, the total would come very near to the estimate of Messrs Thomson and Mylne quoted above.

Sugarcane requires well-drained, light, alluvial soil capable of being irrigated whenever necessary. Stagnant water is its greatest enemy. It occupies the land for full one year from March-April. As a rule sugarcane lands are heavily manured with dung or oil-cake, or both ; the oilcake used was formerly rape cake, but now it is being rapidly replaced by cheaper castor cake. The Provinces which grow most sugar-cane are, in order, the N. W. Provinces (788,000 acres in

1891-92), the Punjab (354,000 acres), and Bengal (282,000 acres). The outturn of coarse sugar per acre has been variously estimated, 27 maunds per acre being the average put down in Dr. Watt's Economic Dictionary. It is sometimes so high as 90 to 100 maunds per acre.

The stools left in the ground after harvesting are sometimes allowed to grow and produce another crop, the process being known as ratooning and the crop as ratooned crop. Sometimes as many as three ratooned crops are taken from the same field. But the yield of the ratooned crop gradually diminishes. The varieties of sugarcane grown are numerous. They have been classified as Mauritius canes, Otaheite canes, Bourbon canes, Batavian canes, Singapore canes, and the so-called Indian or Indigenous canes. The canes that were formerly grown most in Bengal were an indigenous variety, and red Bombay canes. But the latter which was an introduced variety became attacked by a worm and suddenly died out after it had been cultivated for a certain number of years. This has been the history of all cultivated varieties, indigenous or introduced, when cultivated for a number of years in the same district. That this is a fact well known to the ryots, is proved by their constantly changing indigenous varieties of cane for those introduced from other districts. Bengal now grows principally a variety of introduced cane. Sugarcane and potatoe cultivation illustrate powerfully the well-established agricultural principle of the absolute necessity of change of seeds at intervals.

Date-palm is grown all over India as a source of

gurh and sugar Madras, in Southern India, and Bengal, in North India, are the chief date-sugar areas. In Bengal again, Jessore is the district well known for its date-palm cultivation and sugar industry. Those who are interested in date-sugar are referred to Mr. Westland's valuable report on the subject.

Cotton.

Cotton is one of the most important agricultural products of India. Its cultivation and use have been known in India long before it was known in any other civilized country in the world, and authorities seem to be unanimous in thinking that Europe owes its knowledge of cotton and its manufacture to India. Even China with which India has had communication from very early times, seems not to have been aware of it till within comparatively recent times. Another very striking feature in the history of cotton is the fact, that although cotton spinning and weaving were known from very remote times, no direct mention of cotton has been found in the most ancient Sanskrit works, which, nevertheless, refer to other articles used for the manufacture of cloth, such as silk, and wool.

The present importance of cotton dates from the enormous demand of Lancashire caused by the American War of 1862. Prior to 1860, the cotton export averaged in value from 200 to 400 lakhs of rupees, but after that year it rose by leaps and bounds until, in 1864-65, it reached 4,687,972 cwts. valued at 3,387·3 lakhs of rupees, the highest value ever attained. The restoration of peace in America recoiled heavily on the Indian trade, and the export fell steadily to just under 800 lakhs of

of rupees in 1879. Since then the trade has recovered, and in 1888-89, it stood at 5,331,536 cwts. valued at 1,505·6 lakhs of rupees. The English manufacturers look upon Indian cotton with disfavour and prefer the longer stapled American, Egyptian or Brazilian cotton; consequently, exports to the United Kingdom have been decreasing. But exports to other European countries have been increasing. This fact has been explained by the difference of machinery used in the mills in England and in those on the Continent. The English machinery has been constructed for longer stapled cotton, while the machinery used in the continental countries has been specially adapted for the treatment of short stapled cotton like that of India. The Statistical Abstract relating to British India returns 8,859,429 acres under cotton in 1891-92.* The average yield of cleaned cotton per acre varies from 50 lbs. to 175 lbs., the proportion of cleaned to uncleaned cotton being usually taken as 30 : 100. The Province in which cotton is most largely grown is Bombay, Berar comes next, then come Madras and the North Western Provinces; the other Provinces grow less than a million acre each. The variety that is cultivated most is the '*Bengals*'; the *Hinganhati*, the *Amraoti* and the *Dhollera* are also among the most favourite varieties. The time of sowing is different in different provinces, as is also that of picking. Generally, it may be stated, that the sowing begins with the begin-

* If Bengal and the Native States be included, the area would be much larger

ning of the rains and the picking begins with the end of the rains and lasts up to the end of April. The number of pickings varies from three to five according to the nature of the crop. Cotton is essentially a sunny crop, too much rain being injurious to it. As it is a very exhaustive crop, it is seldom grown two or three years consecutively in the same field, being alternated with wheat or millets. As a mixed crop, it is often sown with millets, gram, *til,* tisi or linseed.

For a sketch of the cotton industry, the reader is referred to the next two chapters.

Jute.

Jute was known to the people of India from very remote times; but, as the name of the plant or its fibre is not found in early Sanskrit works, which contain the name of a similar fibre, *san,* it may be doubted whether the plant is indigenous to India, though India is, at present, the centre of its cultivation. Besides India, it is known to be cultivated, to a small extent, in Ceylon, Sunda Islands, South China, Phillipine Islands, in fact in many parts of Southern Asia. Though known all over India, it is almost exclusively cultivated in Bengal, especially Northern and Eastern Bengal. It grows best in the deltas of the Hughly, the Brahmaputra and the Megna. It delights in the alluvial deposits thrown down by rivers subject to annual inundation. The development of jute cultivation and of jute industry is entirely the product of British rule. With the increase of the British trade in grains, especially wheat, grew up the demand for gunny bags, and this gave an impetus to jute culti-

vation. The ryots sure of the market and attracted by cash-return for their labour, began to throw more of their land under jute and devote more of their spare time to the manufacture of the fibre into gunny bags. The area of cultivation began to advance by rapid strides. But the hand-loom failed to supply the ever increasing demand for gunny bags. The steam mills of Dundee grew up, and a large export trade in raw jute was established to feed them. The application of steam in the manufacture of jute in this country was not thought of till about 1857, when the first jute mill was started near Calcutta. Now there are 22 jute mills in the vicinity of Calcutta. Practically jute cultivation is confined to Northern and Eastern Bengal, where, in 1891-92, the area under jute was nearly two million acres. In 1889, the amount of raw jute exported was 10,553,143 cwt., and the number of bags exported was 99,79,587. When these figures are compared with the figures of the previous twenty years, the steady expansion in the cultivation and trade of jute becomes at once apparent.*

The jute which is grown in the Western districts of Hughly, Burdwan, and 24 Perganahs, belongs to *Corchorus Olitorius* with long pods, and that of

* The first record of jute export to Europe in 1828 opens with 364 cwts. Contrast this with the figures for 1889, and the importance of the jute trade requires no other comment.

Eastern Bengal to *C. capsularis* with roundish pods. The former is of a finer quality than the latter but the weight of fibre yielded is less. The finer qualities are grown in lands round the homesteads of peasants. The coarser qualities which supply the major part of the trade grow in low-lying lands, even in the salt-impregnated soil of the Sunderbans, which are generally submerged in the rains. The seed is sown from March to June; and the harvest, beginning with the end of June with the earliest variety, continues till the end of September. When the flowers begin to appear, it is time to cut down the plants. If cut earlier, the fibre is weak, and if later, the fibre, though strong, is coarse and wanting in gloss. The plants after being cut are allowed to wither and drop their leaves for a day or two and then steeped in stagnant water in some road-side pool. Sometimes plants are steeped fresh. The period of steeping varies from two to twenty-five days. If steeped too long the fibre gets rotten and discoloured. When the proper stage is reached, the cultivator standing waist-deep in the foul water, pulls off the skin of the stalk nearest to the root-end and then cleverly manages to separate in one pull the whole of the fibre from the stalk without breaking it. When a sufficient quantity of fibre has been secured, he spreads the fibres on the water and washes them clean very much like a washerman. The washed fibres are then suspended from a rope or spread on the ground for drying. The average yield of clean fibre per acre is put at 15 maunds. Although the area of jute

cultivation is extending every year, and the little cash that the crop brings in to the cultivator, at the time of the year when he stands most in need of it, serves as a great attraction for him, still it must not be looked upon as a crop that has established itself as an essential part of our rural economy; but only as a subsidiary one to be taken up and put by as the demand for the fibre fluctuates.

Indigo.

The seat of indigo cultivation and manufacture is Bengal, the North-Western provinces and the Madras, the Bengal dye being the best all round. But the earliest European records of indigo manufacture are associated with Western and Southern India. It is very probable that indigo was first introduced in Western and Southern India, whence it migrated to Northern India and Bengal which afforded greater facilities. The development of its cultivation and manufacture in Bengal is solely due to the enlightened policy adopted by the East India Company, who began by importing good planters from the West Indies and subsidising their enterprize with advances. Until the introduction of tea, indigo was the only industry in which European capital and enterprise, helped by encouragement from the Govern ment met with marked success. Similar attempts were made to import sugarcane-planters from the West Indies and establish sugarcane plantations in India on the lines of indigo plantation, but these attempts utterly failed. Owing to various reasons which it would be out of place to discuss here, the indigo enterprise is now gradually passing out of the hands of the European

planters who have hitherto had practical monopoly of the business, into the hands of the cultivators and Indian capitalists. This has been specially the case in Madras where the industry has latterly been thriving, while it has been declining in Bengal.

The Statistical Returns for 1891-92, put the area under Indigo for the whole of British India at 541,308 acres. Of this total area, the N. W. Provinces and Oudh had 259,099 acres; Madras 212,255 acres; and the Punjab 58,896 acres. To this may be added 500,000 acres for Bengal, as for want of reliable statistics, the Bengal areas have not been included in the statistical returns. the average annual yield of the dye is estimated at 15 million pounds.

In Lower Bengal there are two October sowings and one spring sowing in April, the crops of both the sowings being ready almost at the same time. The manufacture begins in July and goes on till September. In Southern Behar, the principal sowing begins with the beginning of the rainy season and the crop continues to grow throughout the year, and is reaped in July and August of the next year. The early rain sowings are ready for the sickle in September-October. In North Behar, which forms the head quarters of the indigo industry, the cultivation is carried on in a more elaborate scale. The sowing commences in February and the crop harvested in June. In Madras, it is generally cultivated as a dry crop. In some parts, it is sown mixed with millets. In dry land, one cutting is obtained in Octobor, and another in January. When grown on

wet lands, two cuttings are certain, and sometimes even a third. The system of cultivation is least expensive and troublesome in the *char* lands of Lower Bengal, where the crop requires no ploughing, no manuring, and no watering. Whereas in North Behar, it is cultivated in comparatively high lands, and manures are frequently applied. Another important point of difference between the Bengal and Madras systems is, that in the former the industry is almost entirely in the hands of the planters, whereas in the latter it is in the hands of the cultivators. The present depressed state of the European market has checked the spread of the industry and, if the depression continues, threatens at no distant date, if not the ruin of the industry, at least the closing of many factories. Although indigo is grown and known in other parts of the world, still India has the practical monopoly of the European trade in the dye.

Opium.

Poppy (*Papaver somniferum*) is supposed to be a plant not indigenous in India, but introduced by the Arabs. At any rate, though the use of the seed and its oil was known from very early times, the knowledge of the inspissated juice was certainly introduced by the Arabs. De Candolle, the highest authority on the domestication of agricultural plants, seems to differ from this view; but modern Indian authorities are arrayed against him.

The trade in opium is a Government monopoly. It is grown and manufactured in two special areas: (1) in

the valley of the Ganges round Patna and Benares, and (2) in parts of Central India corresponding to the old kingdom of Malwa. In the former area, the cultivation is a Government monopoly, whereas in the latter, the cultivation is free, but a duty is levied on opium as it passes through the British presidency of Bombay. Opium is also grown in the Punjab for local consumption, and, to a small extent, in the Central Provinces. Throughout the rest of India, it is absolutely prohibited, though it is said that in parts of the wild Himalayan country, it is grown to a small extent, with little or no control whatsoever. The opium grown in the Gangetic valley, is supervised by two Agencies, the Behar Agency with its head-quarters at Patna, and the Benares Agency with its head-quarters at Ghazipur. In 1889, the land actually cultivated with opium in these two Agencies was 459,860 acres. Besides the opium grown in the Gangetic valley, the Punjab has on an average 13,000 acres; the Rajputana States 178,757 acres; Ajmir-Merwara 2,854 acres; Central Indian States 243,494 acres; and a small area in the Native States of Bombay and the Central Provinces. On the whole it may be stated, that the total opium-producing area of India does not exceed one million acres.

Under the Bengal system, cultivators enter into an engagement with the Government Agents to sow a certain quantity of land for which they receive a proportionate amount of advance. They are bound to make over the whole produce, being paid at a fixed rate according to quality. The cultivation requires great care and attention. High lands are best suited to it.

There must also exist facilities for irrigation. Manure where available, is plentifully applied to the crop. The land is repeatedly ploughed and harrowed till November, when the seed is sown. When the plants flower, the petals are first removed to serve as coverings for the opium-cakes. The capsules generally ripen in March, and the operation of scarifying and scraping then begins. The capsules are scarified by pointed irons in the evening, and the inspissated juice collected next morning. In April, the produce is brought by the cultivators to the Agency, where it is weighed and valued, and the accounts settled. It goes through a process of preparation in the Agencies and, when dry, is packed in chests and sent to Calcutta, whence it is exported to China. The average yield of opium per acre has been put at 10 seers for the whole of India.

Tobacco.

Popular opinion seems to suggest that tobacco has been in use in India from very remote times, but historical evidence is against such a suggestion. It was introduced into India by the Portuguese about the year 1605, during the latter part of the reign of Akbar. The aborigines of America are believed to have known and used the drug long before it was known in Europe, where the first tobacco plants were brought about the year 1560. Captain Ralph Lane introduced it first into England in 1586, and Sir Walter Raleigh made the smoking of the drug fashionable. It has since greatly spread to the East, and is now one of the most wide-spread economic plants in the world.

The Statistical Abstract returned 327,121 acres under tobacco in British India in 1891-92. No reliable statistics are available for Bengal; but, it has been estimated, that over 5 hundred thousand acres are under this crop in Bengal. This would make the total for British India a little over 800,000 acres. Tobacco is grown in every district of India for local consumption. The principal tracts in which tobacco is grown for export are Rangpur, Cooch Behar, and Tirhut in Bengal; Karia in Bombay; the delta of the Godaveri, and Coimbatore and Madura Districts in Madras. The well-known "Trichinopoli cheroots" are made out of tobacco supplied by the last two districts, while the "coconadas" are manufactured from the tobacco grown in the *lánkás*, or alluvial islands in the Godaveri, and are hence called *lánkás*. The tobacco of Rangpur, Cooch Behar and of North Bengal is generally exported first to Calcutta, and thence to Burma to be manufactured into Burma-cigars. Cigars which pass under that name are also partly manufactured in Calcutta. Next to Bengal, Bombay had, in 1891-92, the largest area with 86,249 acres, and Madras stood next with 72,747 acres.

The system of cultivation of tobacco varies in its detail in different provinces. It consists essentially, first in growing seedlings in a nursery, and then in transplanting them in fields well prepared and manured beforehand. Facilities for irrigation should exist. In Bengal, tobacco is grown in a nursery in August, September and October, and transplanted in November; and the leaves are ready for gathering from January to

March. As a proof of the excellence of Rangpur tobacco, it may be noted that a medal was obtained by a native of the district for a specimen which he exhibited at the Paris Exhibition of 1867.

Indian tobaccos are not in demand in the European market, and this is said to be due to defective curing. The native system of sun-drying the leaves has been universally condemned, and the American system of shade-drying proposed as a means for improving their quality. Two factories under the supervision of experienced American curers, have been started, one at Gazipur in the North Western Provinces, and the other at Poosa in North Bengal, by a private European Firm (Messrs Beg Dunlop & Co.). The results of their operation are said to be hopeful. The idea emanated from Sir E. Buck, the Secretary to the Government of India in the Revenue and Agricultural Department, who hoped that the success of the firm would induce indigo planters in the neighbourhood to take up the industry. This hope, however, has not yet been realized.

Silk.

Sericulture is a very old industry in India. Silk is found mentioned in early Sanskrit works. But it is almost certain that neither the mulberry nor the silk worm was indigenous in India. When the East India Company established their trade marts in Bengal, they found the silk-industry in a declining state, and took great pains to revive it. As Bengal has always been the chief seat of mulberry cultivation, they established several factories,

with numerous filatures in each, to which the cultivators brought their cocoons. They brought, in 1769, a company of Italian reelers to teach the Italian system of reeling to their factory hands. Bengal silk soon became an important article of trade and superseded all other silk in the European market. The palmy days of Bengal silk-industry lasted till 1833, from which year the Company abandoned the trade on their own account, and it fell into private hands. Sericulture has ever since been steadily declining. Bengal silk which was once the glory of India, and which, at one time, almost monopolized the European market, has now hardly any demand outside India. For instance, the annual export of raw silk from Calcutta about the time when the trading operations of the Company ceased, was about one million lbs., and now the average export of raw silk seldom rises above 6 hundred thousands pounds. Estimated by its value, the decline in the export trade of silk becomes still more conspicuous. The imports of raw silk into India now exceed the exports. The silk of Japan, of China, and of the countries bordering on the Mediterranean now controls the European market.

At present the industry still clings to its old headquarters, namely the districts of Murshidabad, Rajshahi, Bogra, Maldah, Beerbhoom, Burdwan and Midnapur. The cultivators grow the mulberry plant and rear the silkworm which feeds on the mulberry-leaf. Cocoons raised by the peasants are not dealt with by them, but find their way either to small native filatures where they are reeled in the rough native fashion and usually

used in the hand-looms of the native silk-weavers; or they are brought to the large European factories where they are usually reeled and worked up by machinery and then consigned direct to Europe. Mulberry is a perennial plant, and in this respect differs from most agricultural plants of India. Three *bunds* of silkworms are usually obtained in the year, namely in November, March, and August. The silkworm proper of Bengal (*Bombyx mori*) is a thoroughly domesticated species. Besides this, there are several species of wild silkworms that abound in the jungles of Chutia Nagpur, in Bengal, of Assam, and of the Central Provinces. The 'wild silks' are known by the common name of *tussur*, while the 'cultivated silks' go by the name of *garad*. Of these the wild silks, *eri* and *muga* of Assam, are well known and are great favourites. The *eri*-worm feeds on castor-oil leaves, and the *muga*-worm on *sum* leaves. The jungle plants which furnish food for the wild silkworms are, *asan* (*Terminalia tomentosa*), *sal* (*Shorea robusta*), *baer* or *kul* (*Ziziphus jujuba*), &c.

The present decline of Bengal sericulture is believed to be due to silkworm plague (pebrine), bad reeling, and hard competition with Japan, China and Mediterranean silks, and attempts are now being made by the Government to arrest this decline.

Tea.

Tea, Coffee and Cinchona are crops with which the peasantry of India have little or no connection. These agricultural industries are almost exclusively financed by European capital, supervised by European skill, and, except in the case

of coffee, were introduced into India under the auspices of the British Government.

Tea is generally taken to be a native of Assam whence it was introduced into China at a remote past. But recent authorities do not seem to favour this general opinion. They hold that the so-called indigenous tea-plants found wild in the forests of Assam are escapes from cultivation, and that Manipur is its real home. The discovery of the tea-plant growing wild in Assam is, generally attributed to two brothers, named Bruce, who brought back specimens of the plant in 1826. Lord William Bentinck, in 1834, made arrangements for the introduction of its cultivation into India. Plants and seeds were brought from China the following year, and Government took upon itself the formation of experimental plantations in Upper Assam, and in Kumaun and Gharwal. Skilled manufacturers were also brought from China, and the leaf they manufactured was favourably reported on in the London market. Soon after, private enterprize took up the business and Government gradually retired from the field. The first Company that was formed was the Assam Tea Company (1839). The success of the Tea Companies which gradually sprung up led, since 1859, to wild speculations in Tea-shares both in India and in England, and the crash came in 1865. The industry did not recover from the effects of this crash until 1869. Now tea has established itself in Assam, the Darjiling *Duars*, the Punjab, and the Districts of Kumaun and Gharwal in the N. W. Provinces. It is extending gradually in the Chittagong

district, in the Nilgiri hills, on the slopes of the Chutia Nagpur hills, in Bhutan *Duars*, and even in Arakan.

The total tea-area actually under cultivation, in 1891-92, was 266, 219 acres, exclusive of 48,091 acres in Bengal. Of this area, 241, 586 acres were in Assam. The average out-turn of the mature plant in Assam is put at 290 lbs. per acre, and the total annual out-turn is estimated at nearly 50 million pounds The export from Assam into Bengal is approximately valued at $2\frac{1}{2}$ million pounds. The area of tea in the N. W. Provinces, in 1891-92, was 9,374 acres; Punjab 9,011 acres; and Madras 5,481 acres. Until recently almost the whole of the total exports used to go to England, but now attempts are being vigorously made to introduce Indian tea into the markets of Australia and the United States, and already an export trade with these countries has sprung up. The export of tea from the Punjab and the Darjiling Duars to Central Asia has also been steadily increasing of late years.

Three main varieties of tea are recognized in India, namely, the indigenous Assam, the China, and the hybrid; of these the last is most in demand among the planters. The plants are raised from seeds which are sown carefully in prepared nurseries in December and January. The seedlings are ready for transplantation in April, and the operation goes on till July. The site of tea-gardens should be raised and well drained, and, if possible, on the slopes of hills. Plantations succeed best on virgin jungle clearings. Unlike most Indian crops, tea is a perennial plant, and, for two years

after transplantation, requires careful weeding. Afterwards the plant requires pruning every year in winter. From the third year the plants begin to bear, and the yield reaches its maximum in the 10th year. Before being ready for export, the leaf undergoes the processes of withering, rolling, drying and sorting.

Cinchona.

Like tea, quinine-yielding cinchona has been introduced into India at Government initiation. It consists of many species all of which are natives of tropical South America. It was first introduced into Europe about the year 1639 by Countess of Chinchon, hence the name Cinchona. The consumption of the bark in Europe gradually increased, wholesale and indiscriminate destruction by the bark-collectors of cinchona plants in their native forests continued, and, as a natural result, prices rose. The effect of this rise in price was severely felt in India, a great quinine consuming country. With the intention of starting cinchona plantations in India, Mr. C. R. Markham. C.B., was, in 1858, deputed to South America with a view to collect cinchona seeds and plants. A patch of forest land in the Nilgiri hills, Madras, was taken up and cleared by Government to start an experimental plantation. The remarkable success of the experiment led some of the European residents in other highlands and hills of the Madras Presidency to take up the cultivation which thus gradually spread over many districts of the South. In the Bengal Presidency, the cultivation was first started by Dr. Anderson, Superin-

tendent of the Royal Botanical Gardens, Calcutta. The success of the Government plantation in Darjiling, Bengal, has been mainly due to the efforts of Dr. George King, the present Superintendent of the Royal Botanical Gardens and Director of the cinchona plantations, Bengal. The bark is manufactured on the spot by a Government quinologist into a form of cheap quinine known as febrifuge The febrifuge has been steadily replacing imported quinine, and special facilities have been afforded by the Government of Bengal, since 1893, for the dissemination of this cheap and very necessary drug amongst the rural population of the malaria stricken districts of Bengal, through the agency of the post office. No such use is made of the bark of the Nilgiri plantations.

The total area of Cinchona cultivation in Madras, in 1891-92, was 10,799 acres, of which the four Government plantations on the Nilgiri-hills comprise nearly 900 acres. The Government plantations in the Darjiling district comprise an area of nearly 2500 acres. Besides the Government Estates, a few private plantations have been started covering about a similar area. There are about 30 to 40 species of Cinchona with several hybrid forms. The species grown on the Nilgiri Hills and in the South generally are *C. officinalis*, *C. succirubra*; and *C. ledgeriana*, *C. succirubra* and *C. calisaya* are the principal kinds grown in Bengal.

The plants may be raised either from seeds or cuttings; the former mode is cheaper and usually adopted. The seeds are sown thickly in a seed-bed previously prepared and manured with leaf-mould and

protected from sun and rain by a thatch. In about two to three weeks the seeds germinate, and the seedlings when possessed of two or three pairs of leaves are transplanted to a nursery. When about 4 to 5 inches high, they are again transplanted to a fresh nursery whence they are planted in their permanent site when about 12 inches high. In the Nilgiri plantations, the seedlings are transplanted only once before being planted in their permanent sites. The plants yield their first harvest of bark in about five to seven years according to the species. The site of the plantation should be sloping, with rich humus soil and porous subsoil, so as to afford facilities for speedy drainage. Nothing is more harmful to Cinchona plants than stagnant water at their roots. The plants should be rather closely put so as to promote clean erect stem and afford shade to the superficial root-lets.

Coffee.

Unlike tea and cinchona, Coffee does not owe its introduction into India to British auspices. It is generally believed that about two centuries ago, a Mahomedan pilgrim named Babu Budan, on his return from Mecca, brought seven seeds with him to Mysore where the hill range in which he planted them still goes by his name. The cultivation continued on a small scale and remained confined among the native peasantry, till Mr. Cannon took up the industry and established a plantation in 1830 at Chikmulgar in Mysore. At the present day, coffee planting is concentrated in the Madras Presidency, especially

Mysore. A few acres of coffee-plant, however, exist in Lohardagga and Chittagong, Bengal, in Assam, and in Bombay. The area under coffee in British India, in 1891 92, is returned at 127,648 acres, of which 65,371 acres are in Madras, and 62,167 acres in Coorg, and only 82 acres in Bombay. In this return the Mysore area as belonging to a Native State has not been included. Dr. Hunter in his Imperial Gazetteer puts the area of coffee in Mysore at 159,165 acres, in 1881-82.

Coffee is a perennial shrub growing to the height of 15 to 20 ft. For successful coffee cultivation, the climate must be warm and moist, rain-fall ample but not excessive, soil rich in vegetable mould such as new jungle clearings, and the site sufficiently protected and shady. The seeds which are berries are sown in December in a nursery specially and carefully prepared beforehand, and the seedlings transplanted to their permanent sites from June to August. In the second year the plants are topped to keep down their height, and in the third year they begin to bear; but it is not until the seventh or eighth year that the shurbs are in full bearing. The flowers appear in March-April, and the berries ripen in October-November.

The preparation of the berry to make it fit for the market consists in, (1) Pulping, or removing the pulp which covers the seed; (2) Fermenting, to remove the saccharine matter; (3) Washing; (4) Drying; (5) Peeling or removing the 'parchment' (outer coating) and 'silver' (inner coating); and (5) Sizing and winnowing.

The last two operations are not performed by the planter but by the shipper.

Agricultural stock.

The table given here regarding the number of live-stock, carts, and ploughs in British India (excepting Bengal), in 1891-1892, will form a fitting sequel to the summary attempted above of its agricultural condition :

Administrations.	Cows & Bullocks.	Buffaloes.	Horses & Ponies.	Mules & Donkeys.	Sheep & Goats.	Camels.	Carts.	Ploughs.
	Number.							
Bengal	Not available.							
N. W. Provs.	12234664	5591503	342500	270037	4133578	8532	457330	3009686
Oudh	5455686	2439186	140807	62886	1802040	2151	95039	1429408
Punjab	9836923	2767236	226205	493570	6402215	198221	180846	2183239
Lower Burma	822273	899480	11033	1	34030	—	183595	302205
Upper Burma	910414	381242	14404	862	33454	—	189422	290898
Central Prov.	Not available.							
Assam	1458993	122627	5545	27	199315	—	4833	303987
Ajmere	197339	43163	3181	5249	312870	966	4682	39581
Coorg	48525	38332	657	421	4182	—	717	20380
Madras	7665770	6551448	42038	121377	12209791	7	439808	2482509
Bombay	4929768	3216289	135224	60761	3321585	1212	488936	1124932
Berar	1638369	465510	35892	20672	518837	857	134639	132872
Pargana Manipur	3635	2176	85	24	259	—	341	817
Total	44202359	22518192	963530	1038896	28975156	211946	2180188	11419514

Agricultural improvements under British auspices.

Attempts to improve and expand the indigenous agriculture have been made by Government ever since the time of the East India Company, as is well shown by the history of the silk industry in Bengal; of the introduction of Carolina paddy, American cotton, tea and cinchona; of the extraction of fibre from hemp; and of the formation of sugarcane plantations on the model of those in the West Indies.

Agricultural departments.

But there existed no organization for this purpose previous to 1872, when a department of Revenue Agriculture, and commerce was established under the Government of India, with Mr. A. O. Hume as its Secretary. The department was subsequently abolished, but revived by Lord Ripon* by whom the scope of agricultural improvements was considerably enlarged. There can be no two opinions on the far-sightedness of this measure.

Demonstration farms.

Demonstration or Model Farms have been established in different provinces all under Departmental supervision, some financed by Government, and some by local Zemindárs and Rájás. In Bengal, there are the Sibpur Government Farm, the Burdwan Ráj Farm and the Dumraon Ráj Farm, the two latter being maintained by the two Ráj estates respect-

* See Appendix.

ively; in the North-Western Provinces and Oudh, the Cawnpur Experimental Farm maintained by Government; in Madras, the Saidapet Government Farm; in Bombay, the Government Farms in Khandesh; and in the Central Provinces the Government farm at Nagpur. Besides these, there are some minor farms in the Punjab, Assam and Burma. Of the Government Farms, the one at Saidapet has lately been reduced to a small school-farm attached to the local agricultural school. This Farm and the Cawnpur Experimental Farm, have for a number of years carried on a very valuable series of experiments which, though they have failed to develop any very important improvements in the farming practices of the country, have, nevertheless, succeeded to clear out some rational principles of agriculture.

Deep versus shallow ploughing

The experiments of deep *versus* shallow cultivation carried on at the Saidapet and Cawnpur Farms clearly established the greater efficiency of the former provided it is safeguarded by certain precautions These precautions are, that the soil should never be deeply stirred just before sowing time. For seed-bed, the soil should be worked to the depth of 2 or 3 inches and not more. It is also extremely unwise to stir the soil deep after the rains, as deep cultivation at this time exposes the soil to undue evaporation, and tends to make it lose that very element which it should retain. With these precautions, deep cultivation has generally been found useful, especially in clay soils. It makes it easier for the

roots to penetrate deeper and spread wider in the soil in search for food, and thus facilitates the growth of crops. The usefulness of deep cultivation experimentally established in the two farms mentioned above have further been corroborated by experiments in other farms, as the Dumraon Raj Farm ; the Sibpur Farm, near Calcutta etc. Neither is it unknown to the cultivators, because they not unfrequently resort to *spade-cultivation* in garden-culture and in reclaiming waste-lands. The spade or *kodali* may or may not invert the soil, but stirs it to a great depth, and its only drawback is its extreme costliness which makes its general adoption impossible. Where circumstances of climate and soil make it a necessity, deep-cultivation and implements fit for it are not wanting. For instance, the heavy *nagar* plough of Bundelkhund, and similar heavy ploughs of the Deccan and the Ceded Districts are native implements to work the soil to some depth.

Soil-inversion,

Ploughing in the English sense of the term means cutting a clean-furrow of 4 to 9 inches deep, and 4 to 9 inches wide, and inverting it as a clean compressed slice. Ploughing in this sense is unknown in India. Indian ploughs are really no ploughs at all but mere grubbers which stir up the soil without inverting it. Whether soil inversion is a necessity has not yet been clearly established. In fact, where the subsoil is sandy, as in most parts of the large deltaic areas, or contains some poisonous substance, as the lower oxide and sulphate of iron, and poisonous organic acids and salts, soil-inversion is positively

injurious. But in clay lands, where there is a tendency for a 'pan' to form immediately below the few inches (2 to 3) of surface soil stirred by the native plough, soil-inverting plough confers a great benefit: the poisonous and unwholesome salts and acids being brought to the surface suffer oxidation and are thereby rendered inoccuous.

Ploughs,

All English ploughs possess a soil-inverting breast plate or mould-board, but the so-called native plough possesses no such appendage, and herein lies the essential difference between the two ploughs. To the difference in the mode of their working noticed above is to be added the further difference, that the soil-inverting plough works up the whole surface soil in one attempt, whereas the non-inverting native plough must work up and down and across the field several times for stirring up the whole of the surface soil. Several ploughs have been invented in India, under the auspices of the several provincial agricultural departments, in which all the appendages of the English plough have been discarded excepting the mould-board; and in most of these inventions, the mould board more closely approaches that of the American chilled ploughs than the long and curved boards of Howard's or Ransome's English ploughs. The preference for the American model is due to the fact that the short and more flat American mould-boards turn up a jagged furrow slice and thereby serves the purposes both of ploughing and cultivating simultaneously. These newly invented ploughs have not become popular with the ryots, and there is

much doubt whether they will ever be so; but the fact that they are largely used by European Indigo Planters in Lower Bengal, Behar,and the North-western Provinces is rather a hopeful sign.

The ploughs used by the Bengal planters are :—

1. The *Sibpur* plough invented by Mr. Ambika Charan Sen, late of the Bengal Agricultural Department, and subsequently improved by other officers of the Department. Its price is Rs. 7.

2. The *Hindustan* plough of Calcutta, priced at Rs. 10 8 (No. 1) and Rs. 11-8 (No. 2).

3. Sealy's "Turn-over" plough manufactured and sold by Messrs Sealy & Co. of Motihari, Tirhut, priced at Rs. 5-8.

4. The *Bhagulpur* plough invented by Mr. Sakhawat Hossein,late of the Bengal Agricultural Department, priced at Rs. 5.

5. The *St. Jessop's* plough made by St. Jessop, Civil Engineer, Bankipur, priced at Rs. 8

In the North Western Provinces, the 'Kaiser' and the 'Baldeo' ploughs, made in the workshops of the Cawnpur experimental farm, are reported to be popular with the cultivators.

In Madras, the 'Climax' (Rs. 6), the 'E.P.' (Rs. 10-8), and the 'cotton soil' plough manufactured by Messrs Massey & Co. are reported to have found favour with the ryots.

Steam-ploughs.

Whatever may be the advantages of steam-ploughing, the circumstances by which the farm practices of this country are go-

verned render the use of steam-ploughs almost impossible. The division of cultivated land into small areas, the absence of roads to transport the heavy machinery from place to place, and the difficulty of effecting repairs, are almost insuperable obstacles in the way of their introduction. Mr. Bhupal Chandra Basu, in his 'Notes on Indian Agriculture' mentions two instances of the use of steamploughs in India, the first in the district of Banda, in 1881, and the second in Captain Chapman's estate at Bati, Oudh. The undertaking proved profitable in Banda in working up a large area of land infected with *kans* (*saccharum spontaneum*) a coarse grass very difficult to eradicate; but it had to be ultimately given up as no other suitable site for the employment of the steamplough could be found. In the Bati estate also the steam-plough was successful in reclaiming a large area of waste land thickly matted over with reeds and roots. But here also the enterprize had to be given up.

Reclamation of Usar land.

Thousands of acres of land in the North Western Provinces have been rendered perfectly barren by saline incrustations, called *reh*, which consists of a mixture of sodium chloride (common salt), sodium carbonate (*sajimati*) and sodium sulphate in varying proportions. Such *reh*-infected soils go by the general name of *Usar*. *Usar* lands are rare in Bengal, except in Behar where it occurs here and there in small patches. Various experiments have been made by the N. W. Provinces Irrigation and Agricultural Departments to reclaim such lands,

but with indifferent success. The only experiment that seems to have met with a great measure of success is that devised by Mir Mahammad Hossein, late Assistant Director of Agriculture, N. W. Provinces, and an ex-pupil of the Royal Agricultural College, Cirencester. Mr. Basu thus writes of Mr. Hossein's plan "The *modus operandi* consisted in first enclosing the *Usar* land for two or three years with the object of encouraging the growth of vegetation, and the formation of a fertile over-covering of humus. A cattle station was then formed on it in order to obtain manure, the cattle partly paying their way by the sale proceeds of the milk. Fields were marked out and embanked in order to hold up several inches of water in the rains. On the ground being sufficiently softened, ... it was ploughed up, manured, and sown with rice. If the rice took, a winter crop followed. The field might then be regarded as reclaimed and could be let to a tenant"

It will serve no useful purpose to enter into the discussion as to the origin of these saline incrustations. The prevalence however of *Usar* lands along the banks of canals in canal-irrigated areas and in saucer-shaped depressions lends itself to the general belief that rapid evaporation of moisture from the surface-soil, under the influence of a hot sun, in the water logged areas, unduly accelerates soil-capillarity which draws up from the subsoil the injurious salts mentioned above and leaves them on the surface as an incrustation.

Manures and manurial Experiments. Cattle-Manure.

Cattle-dung is the only manure which is universally known and used in India. Analysis has disproved the notion that in manurial value, the Indian cattle manure is inferior to English farmyard manure. It has also exposed a very common fallacy, namely, that the ashes of the dung are as valuable as the whole dung, although in certain localities for special reasons, and under exceptional circumstance, ashes yield better results than the whole dung. Valuable as cattle-manure is, it may be rendered still more valuable by conserving the urine and protecting the manure heaps from rain and hot sun.

Saltpetre.

Careful study of the manurial experiments conducted in the farms at Saidapet, Cawnpur, Dumraon, Bhadgaon, Sibpur etc., show clearly that nitrate of potash or saltpetre (*shora*) is a manure very beneficial to cereal crops and also to sugarcane. The benefit, it must be noted here, is not from an experimental point of view only, but from an economical point of view also. Experiments have shown that the outlay in the application of the manure is more than twice covered by the increase in outturn. Mr. Fuller, the Director of Agriculture and Settlement, Central Provinces, writes : "If the experiment of the past seven years have shown anything plainly, it is that saltpetre is one of the most potent manures available." Saltpetre however when used alone soon exhausts the soil ; and this exhausting nature of the manure may be remedied by adding to it other mineral

manures, or simply ashes. But however valuable saltpetre may be as a manure for cereals, the ryots have not yet taken to it.

Bones.

The use of bones as a manure is unknown in India. They are collected and crushed in and about Bombay and Calcutta into meal for export, principally to England where they are treated with sulphuric acid and sold as dissolved bones. Experiments to test the manurial value of bone-meal for various crops were made in several Government Experimental Farms, but the results were anything but encouraging. Some soils were greatly benefitted by a dressing of bone-meal, while others derived no benefit, or were sometimes even positively injured by the application. Soils rich in organic matter seem to be more fitted for this manure. As yet the use of bone-meal is confined to tea and indigo plantations; and to create a demand among them the operation of bone-crushing by *dhenki* was started some three years ago at Jalpiguri, Darjiling and Saran jails, and the product was almost entirely taken up by the neighbouring planters. But for sanitary reasons, the manufacture of bone-meal in the above mentioned jails has from this year been discontinued. The future of bone-meal as a probable manure for India is said to be extremely uncertain; but if *a priori* considerations have any value, there is every reason to believe that bone-meal or some chemical preparation of it has a great future.

Nightsoil.

Night-soil is a very valuable manurial matter, but the repulsive smell that issues from it has stood in the way of its general use in most countries of the world. In India its fertilizing powers are well known to the ryot, but it is seldom used as a fertilizer outside the limits of certain municipal towns, which have undertaken to dispose of their nightsoil in a manner which, while it secures their primary object of sanitation, also at the same time serves the agricultural interests of the country. Faruckabad and Cawnpur in the North-Western Provinces, Amritsar in the Punjab, and Poona in the Bombay Presidency offer noteworthy examples of the utilization of nightsoil and of the different modes of its conservation and preparation to make it fit for use. Readers interested in this question are referred to the interesting chapter on 'Night soil' in Mr. Bhupal Chandra Basu's 'Notes on Indian Agriculture'. Before leaving this subject, it would interest our readers to know, that urine is much more valuable than the solid nightsoil; that the soiled matter of the former contains 4½ times as much nitrogen as the soiled matter of the latter, while the proportion of phosphoric acid is the same in both; that these two elements, namely nitrogen and phosphoric acid, are two of the most valuable ingredients in a manure, and that China and Japan are the only two countries in the world where the knowledge of the value of nightsoil and urine has been practically utilized all over the country.

Sewage.

In large cities like Calcutta, Bombay and Madras, the nightsoil diluted with water is conveyed through underground sewers and discharged in places outside the cities. The name *Sewage* is given to such a mixture of nightsoil and water. It has largely been utilized in France and Belgium and, to a small extent, in England, to irrigate farms, which are hence called *sewage farms*. The sewage of Calcutta is discharged into the sewage canal on the border of the Salt Lakes, and along both sides of the canal, for about half a mile, a certain area of land has been reclaimed by filling it with town-sweepings. This area is cropped with rain and winter crops, the latter being irrigated with sewage-water. Of course, a small quantity only of sewage is thus utilized, the rest being wasted. In Bombay also a small quantity of sewage is utilized, but the rest is wasted. In Madras alone, the sewage question has received most attention, so as to serve the purposes of both sanitation and agricultural economy. For more detailed information on this point, the reader is referred to the pages of 'Notes on Indian Agriculture.'

Town-sweepings.

Closely connected with the question of the disposal of nightsoil and sewage with a view to restore fertility to the soil as well as to secure better sanitation along with it, is that of the disposal of street-sweepings in towns, which is often a heavy item of expense to our Municipalities. A means devised to subserve the ends both of agriculture and of sanitation will therefore be a great boon to the country. The proper destination of street sweepings is the field

of the cultivator where they would serve as manure, provided he is safeguarded against their insanitary effects. In Calcutta, they are partly used to reclaim certain swamps lying to the south-east of the town; in Madras, it is reported that a part is sold and used as vegetable manure; and in Poona, they are burnt to ashes and the latter mixed with night soil to make poudrette. The practice of most Municipalities which use them to fill up foul tanks and ditches in towns, is most reprehensible on sanitary grounds, and can not be too soon put a stop to.

Steam threshing.

It is a standing complaint with the English millers, who are the great consumers of Indian wheat, that it contains an injurious and excessive admixtrue of small and shrivelled grains of seeds other than wheat and of dirt and pebbles. It is for this reason that Indian wheat does not secure a price and a demand proportionate to its undoubted intrinsic merit, and that the merchant is compelled to admit a percentage of impurities. With the object of obtaining clean wheat, Mr. Ozanne, Director of Agriculture, Bombay, induced Messrs Balmer Lawrie & Co., the Calcutta agents of Messrs Marshall and Sons of Gainsborough, to take their steam threshing machinery imported for exhibition in Calcutta, in 1883, over to Bombay to put to practical test his contention that it would pay to import steam machinery and to work it for hire. Several trials were made in the wheat season of 1884-85 in various parts of the Bombay Presidency, and although the ryots did not take to this

innovation kindly, the results warranted his conviction that the utilization of steam machinery would effect the desired improvement. His Highness the Thakore Saheb of Morvi, Kattywar, is also reported to have brought a steam thresher and made trials in his State.

Silage.

Experiments have been instituted by several Provincial Agricultural Departments as well as the Military Department to store green grass and green fodders of all kinds in under ground pits called *silos*. The sides and bottoms of the pits are made water-tight by masonry work or simply well ramming them with clay. The silo thus constructed is filled with green grass which is well trodden and ultimately covered up in a air tight manner with earth which presses upon the mass uniformly. After two or three months, the fodder is ready to be taken out and given to the cattle. While in the silo, the grass undergoes slight fermentation as long as the air enclosed in the holes and interstices of the mass of grass is not exhausted; and as fresh air can not enter, the fermentation does not go on to an injurious extent so as to make the grass useless. The fodder taken out of the silo is called *silage*. Even a coarse grass unfit for cattle-food in fresh state may in this manner be converted into wholesome fodder. Ensilaging is one of the best means of providing green fodder for cattle at a season when it is most scarce. The results of the trials are very promising, but as yet the ryots have not taken to ensilaging.

Silk experiments.

One of the principal causes of the deterioration of Bengal silk, once the great favourite of the world, has been supposed by competent authorities to be due to a disease which is akin to, if not identical with what is called in France *pebrine*. Mr Nitya Gopal Mukerjee, a Cirencester Graduate, was deputed by the Bengal Government to France to study the genesis of the disease and to learn the mode of its eradication as practised in France and known as the system of Pasteur. On his return from France, he established experimental silk-stations at Berhampur, Kalimpang in the district of Darjiling, Pukhuria in Manbhoom, and Babuikhali in Jessore, all in Bengal. As the result of the last nine or ten years' investigation, Mr. Mukerjee is reported to have discovered a process of eradicating the disease, and to have entirely freed the eggs from its germs in the districts in which he works.

CHAPTER II.

ART-INDUSTRIES. *

Art-industries in ancient India.

The Rigveda bears testimony to the proficiency which the early Hindus attained in the industrial arts. Travellers in later times from Greece, Rome and China marvelled at the skill which the Indians displayed in their manufacturing industries. Offerings were made to the gods in the costliest of plate; armour and arms richly decorated with gold and silver, and costly jewellery and dresses of the finest web adorned the persons of the higher classes; and gems, rich brocades, and muslins of the most delicate workmanship found their way from India to Persia, Arabia, Egypt, and Rome.

* This chapter will comprise industries which are carried on without the help of steam or machinery except of the simplest kind, and which have a remote, if any, connection with natural science.

Under the Mahomedan rule.

Indian handicrafts did not suffer from the Mahomedan conquest. Four centuries had passed away since Mahomed preached the doctrine of Fatherhood of God and Brotherhood of man, and the simple desert life of the Arabs had changed to a life of luxury and culture, before India first began to feel the Mahomedan influence. The fanaticism which led to the destruction of the Alexandrian library was now softening in the Mahomedan mind, and giving place to a sense of appreciation for ancient philosophy and art, and to a love of comfort and luxury. The prohibition against decoration in architecture by forms of living things was now got over by substituting in their place geometrical figures and patterns of foliage and flower, and a way of escape from the injunction against the use of silk was found in the device of mixing it with a nominal quantity of cotton or wool. Thus the obstacles that stood in the way of the progress of arts and manufactures was gradually removed either by slight modification of existing methods, or by favourable interpretation of inconvenient rules and regulations. The anxiety for moderating the effects of hard religious rules against comfort and common sense, which man has shewn in every age and in every clime, has nowhere been better illustrated than in the remark made by the young daughter of the most bigoted Moslem that ever ruled in India. "Father! I have strictly followed the dictates of religion: I have worn the cloth seven folded" observed the daughter of Aurangzeb, when he gave vent to his wrath at the

sight of her dress, made of Dacca muslin, famous all over the world for the thinness of its texture, and known by the name of "morning dew." Instead of crushing the indigenous arts, the Mahomedan conquerors of India became their ardent patrons; and the household of every chief or noble formed, in imitation of that of the Hindu princes around, the centre for skilful artisans. Not only did indigenous manufactures flourish under Mahomedan patronage, but many new industries were imported from beyond the confines of India, such as the carpet-weaving of Kurdistan and the glazed pottery of Ispahan.

Decline of manufacturing industries.

The transactions of the East India Company gave great impetus to some of the industries of the sea-board provinces of India. The great silk industry of Bengal, which until a few years ago was in a highly flourishing condition, owed its expansion to the export trade created by the East India Company. The prosperity of the weaving industry of Dacca about the close of the last century may be best estimated from the fact that, in 1787, fifty lacs of rupees worth of cloths were entered at the Custom House of that town for export to foreign countries. But, in later times, the manufacturing industries of India declined under British rule. The mechanical inventions of modern Europe, the inability of the Indians to march with the times, the decadence of native courts, the increase in the cost of living and in the price of labour, and the change in thought and fashion under

western influence, have everywhere told disastrously upon the manufacturing industries of India; some of the art-industries have totally vanished and are past recall, while some have only been preserved from imminent extinction by the exertions of men like Grouse, Kipling and Hendley.

Revival of Indian art.

There is, however, at the present time a greater appreciation of Indian art in the West than ever before. For this, India is largely indebted to Sir George Birdwood whose writings have vastly contributed to make Indian arts known among Europeans; to Mr. Purdon Clarke who has forcibly drawn the attention of the English public to their unique style and beautiful workmanship; to Sir Edward Buck who, for the last twenty years, has exerted to find a market for Indian goods both at home and abroad; and to the Society for the Preservation and Encouragement of Indian Art. But after all, the art-manufactures of India can only occupy a minor place among the industries of the country. These are the days of rapid and cheap production. The beauty of Indian art-ware depends on the skilful discrimination of colours or patterns, and upon minute elaboration and perfect finish which can only be achieved by patient industry and vast expenditure of time. But, the cry for cheap articles that at the present day characterises the public demand, coupled with the rise in the cost of living owing to the increase in the price of the common necessaries of life and the development of new wants, must prove fatal to any great expansion of the art-industries of India.

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Painting.

The pictorial art made considerable progress in ancient India. It flourished when the Buddhist religion was supreme in India. But not a single specimen of ancient painting exists at the present day, except those executed by Buddhist monks on the walls and ceiling of some cave-temples such as those of Ajanta the construction of which is supposed to have gone on for nearly a thousand years, from B. C. 200 to about A. D. 800. Hidden within subterranean caves in inaccessible districts these paintings escaped the destruction which overtook similar performances in other parts of India.

Although the art of painting is against the injunctions of Mahomedanism and was not, therefore, generally encouraged by the Musalman rulers of India, still the pictorial art was not without its patrons among them. The Moghul Emperor Akbar was one of its greatest patrons. He spoke very plainly about the unreasonable prejudice entertained by his co-religionists against the noble art. "I do not like" said he, "those people who hate painting. They ought to know that a painter has greater opportunities of remembering God, for however life-like he makes a picture he knows that he cannot give it life, and that He and He only is capable of doing that." Akbar had sixteen great artists in his court of whom no less than twelve were Hindus. Specimens of their work have been preserved in the miniature illustrations of the *Razm namah* or the History of the War, which is an abridgment of the great Sanskrit epic, the Mahábhárata. A valuable copy of this work, if not

the original manuscript, exists in the royal library of Jaipur, containing 169 miniature illustrations, which cost more than £40,000. These are "magnificently drawn and illuminated in the highest style of Persian art." A large number of portraits of emperors and governors, executed by unknown artists during the Mahomedan *regime,* is also still in existence. The Saracenic style of painting has left its impress upon the indigenous painting in Western India, by bringing into it a large amount of care and minuteness, and eliminating from it much of its traditional conventionality. The style of making flat pictures in vogue at Lahore and Jaipur,is an example of this mixed art.

Pictures in the Indian style are still largely made at Jaipur. They are painted on card, thick paper, or gold-beater's skin. Dr. Hendley thus describes the industry :—

"Enormous quantities of brightly coloured pictures of every grade of merit are produced throughout the State. Almost every noble has a painter in his retinue, and in the town of Jaipur there are several middlemen who deal solely in pictures. The best men naturally live in the capital, and the pride of these are employed by the Prince, receiving retaining fees in the shape of salaries or lands, with the privilege of working for private parties when not wanted in the palace. Many of these posts are hereditary where the son is capable. Jaipur frequently sends men to other states for special work."

That Indian art has undergone considerable decadence since the time when the fresco-paintings in the Ajanta cave-temples were executed, is shewn by the

pictures generally made by professional painters of the present day. They are usually coloured "daubs," intended to represent by figures and other accessories the exploits of some mythological hero. No attention is paid to symmetry, to perspective, or to an effective adjustment of light and shade. But,the Government Schools of Art in the different presidency towns have already wrought a wonderful change in the ideas about painting hitherto entertained by Hindu artists.

Delhi is the chief centre of the industry in ivory-paintings. Miniature ivory-painting is a development of the art of illuminating Persian manuscripts, so much admired and so eagerly sought after in the days of Mahomedan supremacy. Portraits of Emperors, Empresses and other beauties of the Mahomedan Court, and pictures of the chief buildings in Northern India, like the Táj at Agra and the Juma Masjid at Delhi, are favourite subjects. The artists also copy in colours photographic portraits. Watercolour alone is used. These miniature paintings are often employed to decorate carved ebony caskets, and are also set in jewellery.

Mica-paintings are made at Trichinopoly in South India. They are chiefly illustrative of castes and native industries. Paintings on mica are also executed in Benares, illustrating trades and industries, and the religious ceremonies and festivals of the Hindus. In sets of pictures representing trades, a curious device is adopted to make one face serve for a series of figures. Mica paintings are not in large demand, and the industry does not appear to be in a flourishing condition. Neither

has it any prospect of ever occupying an important place among the art industries of the country.

Engraving.

Of late years wood engraving has made considerable progress in large towns. The reading public has learnt to appreciate illustrated books and magazines, and the demand for woodcuts is increasing year by year. The men engaged in the work are mostly ex-students of the Schools of Art, and the work they execute, when done with care, is not inferior to what is done in Europe. This industry may be reckoned as one solely due to English influence.

Lithography.

A large number of lithographic pictures are turned out, specially in Calcutta and Poona, which find an immense sale among all classes of people, most of them being representatives of gods and goddesses and scenes from the ancient epics, the Rámáyana and the Mahábhárata. These pictures, however, have no artistic merit, most of them being done in imitation of the European style. Until recently colouring was all done by hand, but the chromo-lithographic process is now employed in many places. Maps which have hitherto been imported from Europe, are now being made in the country with the help of this process. Lithographic printing work is largely done in Upper India, as type printing is not suited to the running Persian character.

Photography.

The art of photography is purely European. The industry in its highest form is still in the hands of the Europeans, but a large number of Indians have learnt the art, and their work is finding favour among all classes of the people.

Clay models.

The clay figures made at Krishnagar have acquired great celebrity, and they have repeatedly gained medals and certificates in most of the International Exhibitions held since 1851. There is considerable delicacy and fineness in their work; the figures are instinct with life and expression; and their pose and action are excellent. Clay figures, and models of fruits and vegetables are also made at Lucknow, Delhi, Ambala, Jaipur and Poona. The Lucknow modellers are specially good in models of fruits and vegetables; and, as a rule, they can turn out much cheaper articles than the Krishnagar artists. Small figures coloured in imitation of terra-cotta made at Lucknow are particularly good. Lucknow scenes and figures, however, generally want that unique expression which is a characteristic feature of the Krishnagar models. Figures and models of various descriptions of fruit are made at Delhi and Ambala. The Ambala figures resemble those of Lucknow. The Delhi models are not so good. But excellent models of poisonous snakes in terra-cotta are made at Delhi.

Sculpture.

Decorations in the old temples, and the figures of gods and goddesses scattered all over the country show that the Hindus of ancient times made great advance in the art of sculpture. The industry has long since declined; and, in Bengal, it has almost died out. Sculpturing in the European style is now taught in the Schools of Art at Lahore and Bombay.

Architectural de-signs and models.

Architectural designs, as an aid to builder's work, are only made by native masons when a costly edifice is taken in hand. In large towns, however, where the land at the command of the builders is limited, a design is first made before the construction of a building is commenced. In Calcutta, this is done by men who have been more or less influenced by European education. The preponderance of European influence and want of due appreciation of indigenous art have led to the discouragement of the Hindu architecture. The educated natives of India associate buildings in the European style with enlightenment and progress, and it is the conservative trading and money-lending classes only which still encourage indigenous architecture. Designs of ornamental details are made at Jaipur, notably of carved stone-work as applied to buildings.

Architectural models are made in many parts of the country, chiefly of buildings of historical celebrity. Among these may be mentioned the famons Tajmahal of Agra, models of which, both in marble and soap-stone, are made and sold to visitors. Models in sandstone are made of temples and buildings, both at Lucknow and Mirzapur In Bengal, models are made of Sher Shah's tomb at Sasseram. Similar models are also made in the Punjab.

At Jaipur all the important architectural works to be made in stone are first executed in clay so that the effect might be judged. The men employed work in this material with great facility and skill. Elaborate

models of public buildings are also made to scale in plaster of Paris. The stone-cutters of Jaipur make models of temples and other buildings and send them to all parts of India. Models in brass are also made.

Manufacture of musical instruments.

The ancient Hindus made considerable advance in the art of music. Like other Hindu arts, however, music experienced great decadence in later times; and many of the old books on the subject have been lost. The Mahomedan occupation was specially unfavourable to the cultivation of music. The Musalmans are only allowed to beat a drum called *Dáf* at marriages and other ceremonies, apparently for the purpose of giving publicity to the event. But the sweets of music were very soon found to be too tempting for Mahomedans of culture and refinement; and as early as 1286, in the reign of Emperor KeiKobad, one Amir Khasru discovered the high standard of Hindu music, as compared with the system known in Arabia. Notwithstanding the religious prohibition, he carefully studied the subject, and zealously adopted the Hindu style; and since that time Indian music has counted many ardent followers among the Mahomedans. Akbar the Great collected around him the most expert musicians of his time. Among them was Tán Sen still a household word in all parts of India. So far as musical instruments are concerned, the Hindus do not possess anything like the highly developed instruments used in Europe. But in the manufacture of the instruments they have, considerable ingenuity and skill are

often displayed; and they are often decorated with ivory, silver, and other materials. The industry, however, has considerably decayed in late years.

Decorative wood-carving, applied to architecture.

Carved wood-work is largely employed for doors and window-frames. In Bengal, plain wood is now generally used, but carved doors are still found in old houses. In Malda and Gya there are one or two remarkable pieces of wood-carving on the fronts of balconies of houses. Attempts are being made to resuscitate this work.

In many parts of the North Western Provinces, notably at Sahâranpur, carved doors of good workmanship are still made. Carved facades of wood are also made at Sahâranpur, Farukhabad, Mainpuri, Lucknow, Cawnpore, Muttra, and Agra. The other places in the North-Western Provinces where carved wood work for architectural purposes is made are Bareilly, Azamgarh, and Bulandshahr.

Carved wood-work is extensively produced in the Punjáb. The places most noted for it are Bherá in Sháhpur District; Batálá in Gurdáspur District; Amritsar, Chiniot in Jhang District; Jhelam; Ráwalpindi; Hissar; Lahore; and Siálkot. All over the Province ordinary carpenters do the carving, and there is scarcely any large town where this kind of work is not done. The Indian palace at the Colonial and Indian Exhibition was made by two wood carvers taken from Bherá. The chief specialities of the Punjáb architectural

wood-carving is the frame-work of doors and windows, which is highly ornamented. Most of the wood-carvers in the Punjáb are Mahomedans, and the ornaments carved are entirely Musalman.

Bombay wood-carving, as applied to architecture, is thus described by Mr. B. A. Gupte :—

"As far, at least, as Western India is concerned, the art of wood-carving for architectural purposes most assuredly belongs to the Gujratis. It stands to reason to believe that these Gujratis, who are Jains or Vaishnavas, and who originally belonged to the Buddhist religion, have acquired their art of carving from the early sculptors of the ancient caves or rock temples of India. It also looks probable that the art of carving practised by the Buddhists on the harder material, stone, was transferred to a softer material, wood, during the time of the Muslim rulers of Hindustan, who fostered Indian art by introducing into it less costly and more effective material than that which the natives of the soil were in the habit of using. * * The carved balcony selected for the Calcutta International Exhibition by Captain Temple from Dabhoi, as the oldest work extant, had the cypress tree carved on it, which shows the Mahomedan influence upon architectural carvings. * * The wood-carvers of Dabhoi are very skilful, and it is admitted that the ancient artistic renown of the place is not lost. Fine specimens of wood-carving on doors, cornices, verandahs, balconies, pillars, and brackets of houses are met everywhere in the towns of Dabhoi, Vasu, Sojitra, Pitlad, Pattan, Sidhpur, Vadnagar, and Baroda. The new palace at Baroda which is under construction contains full illustration of the master art the Gujratis possess"

The Central Provinces are deficient in art-manufactures, and wood-carving "is perhaps the only one in which the Provinces can hold their own against other parts of India. It is no uncommon thing to find, even in small villages, houses with carved teak fronts of considerable beauty and in several towns there are streets

with carved wooden frontages displaying very considerable taste and skill. Carved wood plays an important part in Nágpur architecture, and the Marhatta palaces in the vicinity of the city are distinguished by their high verandahs of black teak, often very elaborately carved." In many of the towns of Rajputana and Central India, wood-carving is largely patronised by Jaina merchants for their temples. There exist a few wood-carvers of considerable skill at Indor. Kashmir is also noted for its architectural wood-carving.

In Nepal architectural wood-carving is the most important of all decorative arts found in the country. Pillars, doorways, arches, balconies, windows, and other parts of a building are decorated with highly artistic carvings. Figures of deities, demons, dragons, snakes, and animals of all sorts, also wreaths of flowers and intricate patterns, are worked in elaborate details, the proportions being always graceful and true. The work is expensive, and the industry is therefore fast decaying.

Decorative stone-carving, applied to Architecture.

Upper India and Rajputana are the chief centres of stone-carving for architectural purposes, specially Rajputana, where timber is scarce and stone abundant. The whole country is full of magnificent buildings, both ancient and modern, built and adorned with carved stone of exquisite workmanship. The ruins at Chittor, the temples at Ajmir and numerous other places in various parts of India, and the celebrated Kutab Minár of Delhi, all attest to the excellence of the Hindu

art of stone-carving. The Mahomedans when they came to this country "found themselves," as Mr. Hope rightly observes, "among a people their equals in conception, their superiors in execution, and whose taste had been refined by centuries of cultivation." They forced on them, however, their own bold features of minaret and pointed arch, but borrowed their pillared hall, delicate traceries, and rich surface ornament. The early Mahomedan rulers of Upper India employed Hindu artisans from Rajputana for the erection and ornamentation of their capitals; and these architects soon got influenced by the Saracenic style of building, which they gradually introduced into the construction of palaces and temples in their own country. The famous Tájmahal at Agra, and the palaces, baths, cenotaphs, and mosques at Agra and Delhi all shew the very high excellence to which stone-carving attained in Upper India. The quarries of Makráná, in the Jodhpur territory on the side of the Salt Lake of Sambhar, supplied the white marble for the Taj; while Bharatpur furnished the red sandstone used in the construction of the palace of Akbar at Fatehpur Sikri. Jaipur and Ajmir supplied the coloured marble, for the decoration of these edifices.

On the Bengal side the hilly countries on the west, and Orissa on the south, made considerable advance in the art of stone-carving. The temples, embankments and ruins in Orissa attest considerable skill in it. In the North-Western Provinces, Agra and Mirzapur are the two places where decorative stone-carvings for

architectural purposes are largely made. Perforated stone screens are largely made at Jaipur. The masons of this place have become so proficient in the work that they can design and carry out, almost with their eyes shut, an endless variety of tracery either in stone or plaster. In the Bharatpur State large quantities of perforated lattice-work in red sandstone are made. The Bharatpur screen at the Colonial and Indian Exhibition consisted of a carved red sandstone architrave and false arch supported on carved pillars, and surmounted by a perforated sandstone screen. The stone is a light brown or salmon-coloured sandstone. It is much used in Bharatpur and the neighbouring States, is easily manipulated, and admits of very fine work. In Alwar, stone-carving is largely employed in architecture. Screens are made consisting of panels of white marble, perforated and carved in relief, fitted in a framework of black marble and teak wood, and supported upon three beautifully carved white marble pillars. The designs are in pure Hindu style. In the Alwar State there are quarries of white, pink, and black marble; the quality of the white marble is said to be the finest obtainable in India for statuary purposes. Carved doorways, balconies, archways, and cornices are made in the Karauli State, as well as trelliswork screens which are particularly handsome. Perforated screen work and tracery, pillars, &c., are made in the Dholpur State of red and white sandstone.

Carved panels are made at Gwalior, which are executed with great skill and fineness. In connection with

the Gwalior stone-carving industry may be mentioned the gateway which was made under the superintendence of Major J. B. Keith, and shewn first at the Calcutta International Exhibition, of 1883, and then at the Colonial and Indian Exhibition, London, 1886.

Ornaments.

Indian women being as fond of jewellery as their sisters in other parts of the globe, the makers of gold, silver, and brass ornaments have been important members of the village community from time immemorial. The dress of Hindu women, which leaves a larger part of the body bare than in colder climates, admits of an elaborate personal adornment by means of ornaments. Want of pecuniary means does not stand in the way of satisfying this vanity, for ornaments are made of all sorts of materials, from the cheapest bangles made of lac, glass, or brass, to the most valuable gold necklaces, thickly studded with pearls and diamonds; and thus the wearer has before her a large assortment to choose from, according to the means at her command. Some of the cheap trinkets are so well made as to deserve to be classed within the domain of art. The Indian workman displays his good taste, which seems to be inherent in his nature, wherever he has a chance of doing so. He cannot cut or chase ornamental designs on hard bell-metal articles without raising the price to a point beyond the means of the people for whom they are intended; but he is free to exercise his ingenuity on the softer lac; and, indeed, bangles made of this material in

many places display great taste in the combination of colours and tinsels.

Indian gold and silver ornaments often lack that neatness of execution which is a characteristic feature in European articles of a similar description. To lay by some money as a provision for a bad day is often a more cogent reason for the possession of gold or silver ornaments than personal adornment. Hence massive solid articles of soft pure gold are preferred to flimsy ornaments made of hard alloyed gold but of superior workmanship. An Indian seldom purchases gold or silver ornaments, but he orders the goldsmith to make them for him, the wages of the maker being paid at the time-honoured fixed rate on the weight of the metal used. Such a system does not encourage superior workmanship. Still Indian jewellery is not devoid of art or of delicacy of finish. Mr. Maskelyne in his Report on jewellery in the French Exhibition of 1866 remarked:—

"It is said that even that delicate and most sensitive instrument of touch, the hand of the Hindu, is not sufficiently sensitive for fashioning the finest sorts of Indian filigree, and that children alone are employed in the manipulation of such a spider-web of wire. Of fabrics so delicate, nothing is to be seen among the jewellery at Paris,—indeed the best of the Indian filigree, and that by no means worthy of its source, is to be found among the articles exhibited under the goldsmith's class. It is to be remarked of this elegant and primitive—perhaps very earliest—form of ornament in precious metal, that it had probably reached its limits for delicacy and design at a very archaic period, and has made no real progress in recent times; that, in fact, the early Greek filigrainer worked with as much facility and delicacy as the Hindu artisan of our day, who inherits the skill and the methods he uses by the direct descent of an immemorial tradition. But there are

other forms of the goldsmith's art scarcely less venerable than that of the filigrains, possessed of great native beauty, and which also have survived in India, through the long roll of centuries, as the Zend and Sanskrit languages have survived there, the inheritance of families or clans. Those forms of art are perishing one by one; as the family in whom it may have been handed down becomes extinct or lets the thread be broken, each of these hereditary industries of India moves on with time to its extinction."

Setting of precious stones.

We have in India the most primitive methods of personal adornment in the wild aboriginal races as well as its highest development among the more civilised Hindus and Mahomedans. Bones of animals, tusks of wild boar, plumage of birds, shells and seeds of gaudy colours still afford an endless supply of personal ornaments to the savage tribes of the Indian forests; while on the other hand the skilful *Murassiá-kár* set with unrivalled ingenuity precious stones on massive golden jewellery for the use of the high and the rich. The principal stones used are diamonds, rubies, onyxes, carnelians, emeralds, turquoise, jade, agates, jaspers, &c. After the goldsmith has finished his work the article goes to the enameller to be enamelled on the back, and then it comes to the setter of jewels. Delhi is the headquarters of this industry, and Mr. Kipling makes the following remarks on ths subject :—

" Another speciality of Delhi is the incrustation of jade with patterns of which the stem work is in gold and the leaves and flowers in garnets, rubies, diamonds, &c. For examples of the best of older work we must now go to the great European collections, where are objects of a size and beauty seldom met with in India. The mouth-pieces of *Hukkas*, the hilts of swords and daggers, the heads of walk-

ing-canes, and the curious crutch-like handle of the *Gosáin's* or *Bairági's* (religious ascetic) staff, also called a *Bairági*, are, with lockets and brooches for English wear, the usual application of this costly and beautiful work. Each individual splinter of ruby or diamond may not be intrinsically worth very much, but the effect of such work as a whole is often very rich. The *Murassiákár* or jewel-setter was formerly often called upon to set stones, so that they could be sewn into jewelled cloths. For this purpose, as when the stone was to be incrusted upon another, as with minute diamonds or pearls on large garnets—a common Delhi form—or on jade, he works with gold foil and a series of small chisel-like tools and fine agate burnishers."

Enamelled Jewellery.

Minakari or the art of enamelling has been known in India from very early times. The art now is not in a very flourishing state, except at Jaipur. It is, however, still practised on gold at Jaipur, Alwar, Delhi, and Benares; on silver at Multan, Bháwalpur, Kashmir, Kángra, Kulu, Lahore, Haidrabad in Sind, Karáchi, Abbottabad, Nurpur, Lucknow, Kach, and Jaipur; and on copper in Kashmir, Jaipur, and many other places. But the work done on gold at Jaipur is the best in the world. "The colours employed rival the tints of the rainbow in purity and brilliancy, and they are laid on the gold by the Jaipur artists with such exquisite taste that there is never a want of harmony; even when jewels are also used they serve but to enhance the beauty of the enamel." The Jaipur enamel is of the *champlevé* variety, that is, the outlines are formed from the plate itself, and the colours are deposited in depressions of it.

Mr. Baden Powell in his work on "Punjab manufactures" mentioned Benares as a place which stood next to Jaipur in the art of enamelling. But very little ena-

melling is now done at Benares. What is made is prepared by order. Enamelling is also executed to a limited extent at Lucknow and Rampur, but the artists confine their efforts to enamelling plate rather than jewellery.

Some of the enamelled work of Delhi is almost equal to that made at Jaipur. It is chiefly employed, as at Jaipur, to decorate the back of jewelled ornaments of gold, a bright translucent red enamel being always preferred. The enamelling of Multan, Jhang, and Kangra is generally of a dark and light blue colour, the blue vitreous enamel being the most common.

A very fine species of enamelling on gold is done at Jorhát in Assam. The colours are blue, green, and white, and the effect is strikingly beautiful. The ornaments produced are lockets, ear-rings, bracelets, and necklaces. The sale is not extensive, and is only confined to the Assamese. The ornaments are often set with precious stones.

Gold and silver plate.

Golden cups are mentioned in the Rig-Veda. Later books also offer abundant evidence to shew that golden plate was in use in India from very early times. The custom followed in ancient India of making presents in large golden trays is thus referred to by Sir Edwin Arnold in his "Light of Asia" in describing the rejoicings that took place at Kapilavastu on the birth of prince Siddhártha :—

> "Moreover, from afar came merchant men,
> Bringing, on tidings of his birth, rich gifts
> In golden trays—goat shawls, and nard and jade,
> Turkises 'evening sky' tint, woven webs."

It is not known whether any old specimen of gold or silver work now exists in the country. The chief repositories of such articles, palaces and temples have, in later times, passed through so many vicissitudes, that most of the plate and jewellery must have found their way to the melting pot. Even if any article has by chance escaped this wreck of time, its date cannot be easily ascertained. According to Sir George Birdwood, the oldest example of a really ancient work is a gold casket found within a Buddhist tope near Jellalabad The casket contained some copper coins, which shewed that the monument was built about fifty years before Christ.

The manufacture of gold and silver plate must be an industry of a very limited extent. The abolition of native Indian courts has no doubt told heavily on the trade, and its revival cannot be hoped for until the heavy import duty levied in England upon such articles is removed.

Most of the jewellers in Bengal can imitate gold and silver plate of any form or pattern. But the demand for such work is small, and, except at Dacca and Cuttack, they are not made unless specially ordered The filigrain work of Dacca and Cuttack is celebrated for its fineness and delicacy. It is made in the same way as filigrain jewellery. The articles made are generally scent-holders, rose water sprinklers, card-cases, *Hukkas* (smoking bowls), &c. The cost of labour is high, and equals, or in the case of specially good work exceeds, the price of the silver. The silver plate made

at Bhowanipur near Calcutta has of late attracted considerable notice, and the industry may be said to be a growing one. The frosted silver of Bhowanipur is a work of great merit, but looks too much like European imitation. In the North-Western Provinces, Lucknow and Rámpur are the two principal places where gold and silver plate is made. The articles turned out are generally of the same description as those manufactured at Dacca and Cuttack; but, of late they have taken to making things for European use, like tea-sets, saucers, salt-cellars, sugar-basins and milk-pots. The style of work is different here, and there is a considerable variety in the designs. Some of the work is plain and some ornamental. In some the ornaments are engraved, while in others they are beaten out (*repoussé*). Silver gilt articles are also made at Lucknow.

In the Punjáb, articles of a similar nature like those made in Bengal and the North-Western Provinces are made at Delhi, Kapurthala, Jallandhar, Amritsar, and Lahore. Curious specimens of silver work were sent to the Lahore exhibition from the Kapurthala State. They consisted of dates imitated in silver, and a series of vessels of glass covered with silver work. Mr. Baden Powell stated, that only two men knew how to make this kind of work, one of whom resided at Kapurthala and the other at Amritsar. "The stems of the glass and the rim are covered with silver gilt and flowered (not filigree work), and the bowl with a covering of silver net, made of fine wire. Drinking cups and vases are made in this way." Kashmir is famous for its parcel-gilt

silver ware. The patterns consist of small sprigs of leaves hammered out in relief all over the vessel. Sometimes the ground is silver and the sprigs are parcel-gilt.

Chanda, in the Central Provinces, was formerly famous for its gold and silver work. Sir George Birdwood, in his book on "Industrial Arts of India (1880)," stated that the articles have lost much of their fame, "owing to the decreased demand for their wares under British rule. The District still however, possesses good goldsmiths and silversmiths, whose work is marked by the strongest local character." The industry seems now to have entirely perished, for not only were no specimens sent to the recent Exhibitions, but no mention of it has been made by the Provincial officer in his report to the Government of India on the art-manufactures of the Provinces.

Rajputana, with its native courts, affords great encouragement to the manufacture of gold and silver plate. A very fine collection of such work was sent from Tonk to the Jaipur Exhibition, to which the Jury awarded the first prize, for, as they said, they "were good in design as well as in execution." There has of late been introduced at Jaipur a new style of surface decoration, *viz.*, engraving figures on the plate in such a way as to imitate in metal the clothing of human beings, natural fur of animals, and the feathers of birds. But in the opinion of Dr. Hendley, "such work though clever, is unsuitable to silver, though on gold perhaps it is more excusable, as the value of the latter metal would prevent

frequent use and therefore much cleaning." Larger articles, such as thrones and staves of canopies, are made at Jaipur in precious metals. At Bogru, a town in the Jaipur State, silver plate is made on a moderate scale, by a local goldsmith. The Maharaja of Alwar has a number of silversmiths in his pay, who annually turn out various articles of good workmanship. The articles usually made are tumblers, cups, saucers, tea-pots, *Hukkas*, betel-holders, &c. Processions with figures of men and animals, carriages, and other accessories are often beautifully engraved on the silver tumblers and cups, the designs of which are generally admired. Gold articles of a similar description are made for the State by goldsmiths in the pay of the Chief. Patan, a town in the little State of Jhallawar, has a reputation for its crane-shaped rose-water sprinkler. Perfume boxes, betel-nut trays, tumblers, cups, and smoking bowls with covers and silver chains hanging from them are also made at Patan. Nor is the little State of Bikánir any way behind in this art, for which Kach on one side and the sister States of Rajputana on the other have acquired a celebrity among the wealthy classes of India. The inaccessibility of this State attracted towards her a large number of peaceful merchants, who left their homes to escape the extortion of the later Mahomedan kings and the pillage of the Marhattas. The wealth they brought with them has contributed largely to the development of the art-manufactures of Bikánir. Excellent examples of Bikánir silver work occupied a prominent place at the Jaipur Exhibition and in the later Exhibition in London.

Work almost similar to that made in Upper India and Rajputana is done at Gwalior, Rámpurá in the Indor State, and at Dhar, Alipurá, and Chhatrapur in Central India. The articles made at Gwalior and Rámpurá have a great reputation for their superior design and fineness of execution, those of the latter chiefly consisting of silver *repoussé* work ornamented with gold. Dhar makes an ingenious rosewater sprinkler in the form of a bird.

But no part of India is more celebrated for its work in precious metals than Kach in the Bombay Presidency. The interest lately created among Europeans in the art-manufactures of India has enhanced the demand for such articles, and the industry would have a great future before it, if ever the Government of England could be induced to abolish the import duty on gold and silver plate. The increase in the demand has not produced in this case the usual degeneration in the design and execution of the articles turned out. Dholka, Viragram, Ahmadabad, Junágad, and other places in Gujrat were formerly famous for their plate, but Kach has now taken them all under its wing ; and whether such articles are made at Bombay, Poona, or Ahmadnagar, they all go by the name of "Kach silver ware."

In the Madras Presidency gold and silver wares are made at Dindigul, Palai in Madura District, Godávari, Tanjore, Tirupati in North Arcot District, Cochin, and Vizianagram. Articles in solid silver are also made in the Madras School of Art, from which a candlestick

designed after the manner of a native Hindu lamp, a water-vessel in solid silver, chased and ornamented, and a spoon, with a bowl supported by parrots, the stem ending with a five-headed snake overshadowing the *Lingam*, were sent to the Colonial and Indian Exhibition. A card-case, a scent-casket, and a bouquet-holder of filigrain work, a betelnut box with fluted and embossed ornamentation, and a shallow silver bowl with flutted sides and chased centre, were sent to the above Exhibition by the Mahárájá of Cochin, while the Rájá of Vizianagram contributed elephant seats (howdahs) and trappings for elephants and horses used on ceremonial occasions. Among the presents made to His Royal Highness the Prince of Wales, while he was in India was a shrine screen, of pierced and hammered silver, which in Sir George Birdwood's opinion "is a wonderful example of manipulative dexterity."

There is some originality in the form of trays, scent-holders, betel-boxes, water-goglets, cups, and other articles made by the gold and silver-smiths of Mysore, and they display a considerable amount of delicacy and ingenuity in chasing, ornamenting, and engraving the patterns. For superior workmanship in silver, the wages equal the value of the metal used, and in gold one half its value. Among the presents made to the Prince of Wales was a beautiful golden tray, the rim and cover of which "are elaborately enriched with embossed flowers and leaves; while the bottom is left plain, excepting the well-proportioned border, and a centre panel of flowery geometrical design, which is enchased,

so as not to interfere with its necessary flatness of surface." Scent-bottles and caskets of filigrain work are made at Travancore, and silver wire is often employed for the decoration of cocoanut shells. Zelgandal and Aurangabad are the only places in Haidrabad noted for their silver ware. The articles are made in filigrain work.

Enamelled ware.

The art of enamelling as practised in India has already been described under the head of jewellery. Jaipur occupies the first place in this branch of Indian art-manufactures. It is an old industry in this beautiful city of beautiful handicrafts. The oldest example of Jaipur enamel is the crutch staff on which Mahárájá Mán Singh leaned when he stood before the throne of the Emperor Akbar at the close of the sixteenth century. "It is fifty two inches in length, and is composed of thirty-three cylinders of gold arranged on a central core of strong copper, the whole being surmounted by a crutch of light-green jade set with gems. Each of the thirty-two upper cylinders is painted in enamel with figures of animals, landscapes, and flowers. The figures are boldly and carefully drawn by one who had evidently studied in the School of Nature; the colours are wonderfully pure and brilliant, and the work is executed with more skill and evenness than anything we see at the present day." Of modern articles of note may be mentioned the round plate presented to the Prince of Wales. It took four years to complete it, and, according to Sir George

Birdwood, is "a monument of the Indian enameller's art." It is said that the enamel workers at Jaipur were originally brought from Lahore by Mahárájá Mán Singh. The fact of their being Sikhs and their dependence at the present day on the Punjáb for colouring materials, confirm the tradition. Besides personal ornaments, cups and plates of gold are enamelled, and although silver enamel of good quality is frequently made, the artists do not like to work in this metal, as "the difficulties of fixing the colours and the risks are much greater than when gold is used."

Kashmir stands next in importance in the art of enamelling. The industry has achieved considerable development in the course of the last few years, and Kashmir enamelled works in silver, copper, and brass are now sold by all dealers in Indian art ware in Bombay, Calcutta, and other places. Betel-boxes, spice-boxes, *Hukkas*, and other small articles are enamelled at Delhi. The Delhi work is not much inferior to that of Jaipur. Enamelling is also done to some extent at Multan, Jhang, Bháwalpur, and Kangra. The Kangra enamel is remarkable for its excellence of blue. A little enamelling of the Kangra style is also done in Kulu, chiefly on articles of jewellery. In the North-Western Provinces, Benares has long been famous for its enamel in gold. The industry is on the decline, and is now only done to order. A little enamelling is also done at Lucknow and Rámpur. A splendid example of Lucknow enamel, in the shape of a *Hukka*, was sent to the Calcutta International Exhibition. A similar example of Lucknow

work was sent to the Jaipur Exhibition by the Rewa State. It was made of silver, the blue and enamelled grounds contrasting beautifully with the flowers of white spinel

An imitation green enamel is made at Pratábgarh in Rajputana. The process of manufacture is not known, as it is a secret jealously kept by two or three families who practise the art. The industry is chiefly devoted to the manufacture of flat plaques of different shapes, which are sold to other artists, and utilised "either as separate ornaments or as backings for enamelled brooches or bracelets, which can thus be worn with either side outmost." Similar quasi-enamel is also done at Ratlám in Central India, the colour there being blue, while that of Pratábgarh is green.

Eucrusted ware.

Under this head may be classed the celebrated Tanjore metal work, the art in which consists of soldering, wedging, or screwing on silver patterns and figures of Hindu deities on copper vessels. The figures are made in the famous Madras or *Swámi* style, and the white figures in high relief on red copper ground produce an effect at once bold and striking.

Damascened Work.

Sir George Birdwood describes "Damascening as the art of encrusting one metal on another, not in *crustæ*, which are soldered on or wedged into the metal surface to which they are applied, but in the form of wire, which, by undercutting and hammering, is thoroughly incorporated into the metal which it is intended to ornament." Prac-

tically, damascening is limited to encrusting gold wire, and sometimes silver wire, on the surface of iron, steel or bronze. As its name implies, the industry originated at Damascus, where it underwent its highest development. It was however, brought to India directly from Kabul and Persia. Kotli Lohāran near Siālkot and Gujrāt, both in the Punjāb, are the two chief seats of this industry, but the art is also practised at Lahore, Multan, Jaipur, Karauli, Alwar, Datiá, &c. The use for which it was originally invented was the decoration of arms and armour, and the glory of the art has departed with that of the warriors of old who fought with shields and swords, buckles and breastplates, and maces and matchlocks. The art has therefore got antiquated, but happily the makers have turned it to the ornamentation of articles for ordinary use, chiefly in a European household; and in the manufacture of such things as well as of shields, arms, and armoury which Europeans purchase as curious, damascened work in India still maintains its precarious existence.

Bidri-Ware.

Another style of damascened ware is what is known as the *Bidri* work. This peculiar art derives its name from the town of Bidar, its original home, which according to tradition, was founded by a Hindu king of the same name, four centuries before the Christian era. The place lies about 75 miles to the north-west of Haidrabad within the dominions of the Nizam. Bidar was long the capital of a Hindu kingdom of the same name, and after its subversion by the Mahomedans it continued to be the

seat of Government under the Bahmani Dynasty of the Musalman sovereigns of the Deccan. It is said that one of the Hindu kings of Bidar invented the manufacture of *Bidri*-ware, who used the articles to hold flowers and other offerings which he daily presented to his household gods. Considerable improvements were introduced into the manufacture by his Hindu successors, but it attained its present state of excellence under the Mahomedans. Like many other handicrafts of India, it declined with the downfall of the Mahomedan Empire, although it attracted the notice of men like Dr. Heyne, Dr. Buchanan Hamilton, Captain Newbald, Dr. Smith, and others. Its decline as an industry was so complete that, in the "Oudh Gazetteer," the most comprehensive work on that province yet published, no mention is made of *Bidri*-ware among the manufactures of Lucknow, although for more than a century it had flourished most in the capital of Oudh. The mode of manufacture is very nearly the same in all the places. The manufacture of *Bidri*-ware is carried on under a system of division of labour, the different processes being generally performed by three classes of people, *viz.*, the moulder, the carver, and the inlayer. The moulder prepares the alloyed metal, casts the vessel and turns it to its proper shape by his lathe. The carver engraves the patterns on the surface of the vessel, and the inlayer designs the patterns, inlays the ornament of gold or silver, and finally colours and polishes the article. The four notable seats of *Bidri* manufacture are Bidar, Lucknow, Purnia, and Murshidabad.

In Haidrabad the industry is still an important one, as it commands an extensive sale owing to the practice prevalent in the State of presenting a set of *Bridi*-ware to the bridgroom at the time of marriage. "No dowry is considered complete, among the better class of Mahomedans, unless a complete set of *Bidri*-ware, from bed-legs to a spittoon, is included. The high prices often render it necessary for the father of a family to begin his collection years before his daughter is marriageable."

Brass and copper manufactures.

Brass and copper vessels are usually used in India for domestic purposes instead of porcelain, glass, and silver ware. Brass consists of copper and zinc, but a kind of bell-metal having copper and tin for its component parts called *Phul* in Upper India and *Kansa* in Bengal, is also largely employed in the manufacture of plates, cups, and drinking vessels. Ordinary domestic utensils are not decorated, as in consonance with the Hindu idea of purity, these are required to be scrubbed with earth or sand before being washed each time they are used. Hindus generally use brass vessels for ordinary purposes; Mahomedans prefer tinned copper. Brass, copper, or bellmetal manufactures may be classed as sacrificial utensils, cooking utensils, plates, cups, drinking vessels, and miscellaneous articles.

Sacrificial vessels differ in different parts of the country, not only in shape, but in the metals of which they are made. On the Bengal side, they are generally made of copper, while in other parts of India brass is

largely employed. Bell-metal is not considered pure enough for such purposes. Images of deities are also made of brass and other metals, and considerable ingenuity is often displayed in their manufacture. The sacrificial vessels are often decorated with floral designs and figures of divinities.

In Bengal, vessels of brass and bell-metal are made in many places, those of Khánkrá near Murshidabad and Jhanjharpur near Darbhángá being considered the best. The other places noted for such manufactures are Calcutta itself, Kánchannagar in Bardwán, Rájsháhi, Kishanganj in Purnia, Islamabad in Dacca, Bánsberiá in Hugli, and Cuttack. Patna makes a peculiar kind of brass tea-urn which is in constant demand among the better classes of Hindus and Mahomedans. Brass articles are for the most part plain being simply moulded and beaten into the required shape, and have no claim to be classed as art-manufactures, although in some a rough attempt is made at decoration with lines, dots or figures of deities and animals. They are sold by weight, the price varying from half a rupee to two rupees a pound, according to the quality of the metal and the labour spent in the manufacture. The Khánkrá vessels are prized for their fine shape and the polish given to the articles.

In the North-Western Provinces, household utensils are largely made at Sultánpur in Oudh, and Umlipatti in the Azamgarh District, besides the ornamented ware manufactured at Benares, Lucknow, Moradabad, Jhánsi, Lalitpur, and Gorakhpur. Besides what is known as

the Benares ware, this sacred city is noted for its sacrificial and domestic utensils, toys, and figures of deities. The most important of the North-Western Provinces brass and copper manufactures are however, the Benares brass ware, the Moradabad brass ware, and the Lucknow copper vessels. All these manufactures have advanced in rapid strides into European favour during the last few years, and at present no dealer in Indian art manufactures considers his stock-in-trade complete without a good collection of these articles, specially of the first two.

Benares ware.

In the variety of the designs, in the excellence of the cast, and the rich colouring which gives to the articles a gold-like lustre, Benares brass ware has not been surpassed by any other town in India. The ware is now largely sold not only in India but all over Europe. Plates, water-goglets, trays, cups, salvers, shields, betel-holders and various articles are made in this style of work. The brass is first moulded into the required shape, and then patterns are engraved.

Moradabad ware.

Moradabad brass ware is, like the Benares ware, universally admired. Its origin has no connection with religion, and it seems to be an art developed, if not originated, by the Mahomedans. The manufacture was not in a very flourishing state before the year 1876. In that year, the Agricultural Department of the North-Western Provinces, then presided over by Sir Edward Buck, persuaded a hotel-proprietor at Allahabad to open a stall

for the sale of Indian manufactures to Europeans going to England who generally made a halt there. The elegant shape of the vessels, with their rich floriated patterns standing out in their gold or silvery brightness on a blank ground, soon attracted the attention of the European visitors, and their sale went up by leaps and bounds As in the Benares ware, the brass is first moulded into the required shape of the vessel, and then the patterns are chiselled out.

In the Punjab, Amritsar, Pesháwar, Delhi, Jagádhri, Riwári, Hushiárpur, Daská, Gujránwálá, and Pind Dádan Khán are the places most noted for their manufactures in non-precious metals. Delhi is famous for its huge cooking pots, called *Degchás* Kashmir is famous for its engraved copper ware, a good collection of which was sent to the Glasgow International Exhibition These articles are now extensively sold to Europeans and consist of trays, plates, claret-jugs, salvers, tobacco-jars, tea-services, &c.

In the Central Provinces, brass utensils were largely made in many places, specially at Bhandárá, Lodhi-Kherá in the Chhindwárá District, Timorni in the Hoshangabad District, Mandlá, and Sambalpur. They consisted of plain ordinary household utensils, like similar articles made in other Provinces, without any pretension to artistic merit, but were much sought after on account of their neatness and durability. But the industry has much declined within the last fifteen years.

Ordinary household utensils are largely made at

Jaipur. They are plain, but highly polished. Of these, Jaipur smoking bowls, called *Gargarás* or *Gurguris*, are noted all over Upper India. Of late, Dr. Hendley has introduced the manufacture of brass trays and other articles with arabesque designs from old Indian patterns in *repoussé*. These are made by several exceptionally skilful workmen. In fact, the Jaipur men can imitate anything given to them. The patronage of a liberal court, which has always been noted for its encouragement of art, has led to many good workmen from different parts of India settling there. Salvers and vases of Hindu shapes engraved with mythological figures, soap-boxes, betel-boxes, &c., pierced with floral and geometrical patterns, are made at the School of Art and in the Bazar. Plates and vessels are also made in the School of Art with designs of mythological or hunting scenes scratched upon them. A beautiful hunting scene was thus depicted on a large plate shewn at the Colonial and Indian Exhibition.

Wood-carving.

An account of wood carving has already been given under the head of "Decorative wood carving as applied to architecture." The art is also employed in making smaller articles of household furniture.

In Bengal almost the only place where carved furniture of note is made is Monghyr. The wood used is the Indian ebony (*Diospyros melanoxylon*) found on the western hills, on which ivory and horn are sometimes inlaid. The industry is now stationary.

Cabinets, writing boxes, pen-trays, cribbage boards, and other articles of household furniture are made. Toys and personal ornaments suitable for European use are manufactured of ebony as well as of palm and areca-nut wood.

The most important wood-carving, in small work, carried on in the North-Western Provinces is that done at Naginá in the Bijnor District. It is in Indian ebony, on which floral designs are delicately cut out with the chisel. Boxes, pen-cases, inkstands, book-covers, and other articles are thus beautifully ornamented. The industry has greatly developed in late years, and a large number of people is now engaged in the trade. In the more elaborate and expensive work, the black is often relieved by silver and mother-o'-pearl mounts, but it is a question how far this extraneous and new style of ornamentation preserves the integrity and the artistic merit of the original work.

In the Bombay Presidency, wood-carving is now principally carried on in Ahmedabad, Surat, and Canara. At Ahmedabad there are some 800 families of carpenters; yet the industry has greatly declined compared to what it was in former times. Mr. B. A. Gupte says: "The art of wood-carving was almost extinct in Ahmedabad; the only articles made being a few samples of elaborate flower-stands, picture-frames, card cases, &c., in blackwood, for the European visitors to the city, but by the enterprise of Mr. Lockwood De Forest an American gentleman, a revival has taken place."

Sandalwood carving.

The principal places where sandalwood carving is carried on are Canara, Surat, Ahmedabad, and Bombay in the Bombay Presidency; Travancore, Trichinopoly, Haladgi, Raidrug, Tirupatur, Madura, Udiyaghir, Karnul, Coimbatore, Kistna, and Godávari in the Madras Presidency; and Soráb and Sagar in Mysore. The carvings are most elaborate and minute, sometimes representing patterns of intricate foliage and flowers, but more often mythological scenes ornamented with geometrical and floral designs.

Inlaid woodwork.

Wood is inlaid with ivory, horn, brass, and silver. In Bengal, the art is very litle practised. Only in Monghyr ivory and horn are sometimes inlaid on furniture or small articles made of ebony wood. The demand for ivory-inlaid ebony work is very small and is apparently diminishing. There are only six or eight carpenters now in Monghyr, who follow the profession of furniture making and inlaying on wood.

As stated before, the Naginá wood-carvers, in the North-Western Provinces, decorate their more elaborate and expensive work with silver and mother-o'-pearl mounts as a set-off to the black of the ebony of which the articles are made. But the most noted inlaid wood work in the North-Western Provinces is the *Tárkashi* work of Mainpuri. The articles are made of *Shisham (Dalbergia latifolia)* wood, on which foliage and geometrical designs are most minutely formed by hammering in fine brass wire. The surface is then polished, and the article then presents to the eye an intricate

maze of golden patterns running into all directions in endless profusion, though with the usual regularity and symmetry of an Indian handiwork. The art was all but extinct a few years ago, when it fortunately attracted European attention. Though not yet in a prosperous condition, it is however, slowly reviving, and the last few Exhibitions have done it much good. It can be introduced with good effect for pannelling doors, picture framing, &c.

Punjáb is celebrated for its ivory and brass inlay on wood. Ivory inlay is extensively carried on at Hushiárpur, and brass inlay at Chiniot in the District of Jhang. Small square wooden seats, almirahs, wall-brackets, tables, chairs, boxes, desks, rulers, picture-frames, cabinets, and other house-hold articles made of *Shisham* wood are inlaid with ivory at Hushiárpur. A small edging of blackened wood is occasionally introduced to set off the ivory. Brass inlay is also practised at Hushiárpur, but the best work of the kind comes from Chiniot. The brass is cut into thin plates before being inserted on the wood, which is done with great precision and neatness.

In the Madras Presidency, the art of inlaying on wood is chiefly practised in the well-known Vizagapatam work. Work-boxes, card-cases, inkstands, chess boards, and other knick-nacks are made here, chiefly of sandalwood, which are decorated with ivory fret work, tortoise-shell, horn, &c. Cabinet work of ebony and *shisham* wood is inlaid with ivory at Bangalore and Mysore.

On the Bombay side work-boxes, glove-boxes, and other articles are minutely decorated by inlaying on the surface small pieces of ivory, stag-horn, tin, glass, &c. This work is done at Surat, Baroda, Ahmedabad, Kach, and Bombay.

Lacquered ware.

The art of colouring and working wood by putting layers of lac upon it is practised all over India, the Province of Punjáb being the most noted for manufactures of this kind. The art consists in coating an article of wood with lac of different colours, and often cutting out patterns on it with a chisel.

Very little lacquering is now done in Bengal, Murshidabad and Patna being the only places where the industry is practised on a limited scale. It is said that good lacquered ware is made at a place near Sirájganj.

In the North-Western Provinces, lacquered wooden articles are made in many places, notably at Bareilly, Agra, Lucknow, Fatehpur, Sháhjahánpur, Benares, and Mirzapur. Chairs, tables, and similar articles are made at Bareilly; boxes, plates, and small articles at Agra; legs for bedsteads at Lucknow, Fatehpur, and Sháhjahánpur; and toys at Benares and Mirzapur. Each District has a style of its own different from its neighbour. The art of lacquering is, in the North-Western Provinces, more applied to the decoration of bedstead legs than to any other article. Toys made at Benares, Fatehpur, and Mirzapur are more remarkable for their cheapness than beauty. Packs of native cards are made at Fatehpur of

thin wood, painted and lacquered, and also nests of boxes, in the construction of which considerable ingenuity and skill are shown.

In the Punjáb, the Pákpattan, Derá Ismáil Khán, Firozpur, Sahiwál, and Hushiárpur have acquired a particular reputation for their lacquered wares. Pákpattan articles were hitherto considered the best, but of late other places have equalled, if not surpassed, the Pákpattan manufactures. Bed-legs, frames of rope bedsteads, boxes, sticks, chairs, &c., are made in this place. "The work has a fine polish and generally a marbled or mottled appearance, often in two or three colours, and the article finished with a flowered border, which latter is done by a species of handiwork different from the rest, and certainly affording a good instance of the delicacy of native handling."

Inlaid marble of Agra.

The mosaic work of the Tájmahal is now employed in the decoration of plates, cups, boxes, and other small objects. The art consists in inlaying on white marble ground coloured stones, such as jasper, heliotrope, carnelian, chalcedony, &c., in exquisite arabesques. Mother-o'-pearl has recently been introduced in the work, but not with good effect. It is supposed by many that the mosaic decorations of the Tájmahal were of Italian origin. This supposition is upon the statement of Father De Castro, who lived at Lahore at the time when the Táj was under construction, that this celebrated edifice was designed by a Venetian architect, and that the

internal decorations were executed under lhe superintendence of a Frenchman. On the other hand, there is a tradition in the country, that one Isa Muhammad Effendi, a Turk sent to the Emperor Sháh Jahán by the Sultán of Turkey, was the designer of this magnificent mausoleum. In a paper contributed to the *Indian Journal of Art* (I., p. 61), Sir George Birdwood has, however, conclusively proved that mosaic work is of Eastern origin, and that it never flourished in the West. Besides, a close observation of the Italian work of the time has convinced him that Western hands could not have executed the mosaic decorations in the Táj. He says: "From the Orpheus, which is traditionally held to be a likeness of Austin himself, to the pictorial representations of fruits and birds, they are nothing more than clumsy attempts to directly copy oil and fresco paintings in an unsuitable material; and it is quite impossible that the men who devised such artistic monstrosities could have been the same as those whose hands traced in variegated *pietra dura* the exquisite arabesques of the Taj, informed in every undulating line and drooping bud, and bursting flower, with the true principles of inlaid decoration."

Ivory-carving.

Whatever the position of the industry might have been in ancient times, ivory-carving is not in a flourishing state at the present day, if the preparation of ivory for inlay work is excluded from the account. Carved objects in ivory are worked in very few places, the most noted being Mur-

shidabad and Travancore. Ivory in large quantities is brought to Bombay from Africa. A portion of it is reshipped and the rest kept to meet the demand in India. There is also a local supply from the herds of elephants that roam in the jungles of Assam and Southern India. This supply has, however, become very small now, owing to the stringent regulations passed by Government for the protection of wild elephants. The articles generally carved out of ivory are figures of gods and goddesses, men, animals and other toys, combs, ornaments, *Chauris* or fly-drivers, mats, caskets, &c. The Murshidabad manufactures are perhaps the best in India, fully displaying in them the finish, minuteness, and ingenuity characteristic of all true Indian art. They are remarkable also considering the simple and rough nature of the few tools by which they are made. The industry is, however, declining, and it is said that the number of artizans engaged in the work is not now one-fourth of what it was twenty years ago.

Pottery

Sir George Birdwood has pointed out how in India precedence is always rightly given to the shape of the vessel, and the decorations, if any, are always subordinated to the shape. He says:—

"In the best Indian pottery, we always find the reverent subjection of colour and ornamentation to form, and it is in attaining this result that the Indian potter has shewn the true artistic feeling and skill of all Indian workmasters in his handiwork. The correlation of his forms,

colours, and details of ornamentation is perfect, and without seeming premeditation as if his work were rather a creation of nature than of art; and this is recognised, even in the most homely objects, as the highest achievement of artifice."

Unglazed earthern pottery has been made in India from time immemorial. The practice of throwing away the pots in use, and obtaining fresh ones on prescribed occasions has given great impetus to the trade. Every large village in India has its potters, and baked pottery for everyday use is made all over the country. The art of making glazed pottery seems to have come to India from China by way of Persia. The most notable places where artistic pottery is now made are Khulná, Dinájpur, Sewán, and Ráníganj in Bengal; Azamgarh, Lucknow, Sitápur, Rámpur, Aligarh, and Khurjá in the North-Western Provinces; Delhi, Multan, and Peshâwar in the Punjáb; Jaipur; Burhánpur in the Central Provinces; Madras, Madura, Salem, and other places in the Madras Presidency; and Bombay, and Hallá in Sind in the Bombay Presidency.

Glass manufactures.

The manufacture of glass was known in ancient India. Dr. Rájendra Lála Mitra supposes that it was made of pounded crystal. But, at present, the material mostly used for the manufacture of glass is an impure carbonate of soda, called *Reh*, an efflorescence that has of late laid waste large tracts of country in Upper India. Manufacture of glass in India is still, however, in its primitive state, the indigenous production being usually a

coarse blue or green glass full of flaws and air bubbles. This is produced by melting the *Reh* soil over a strong fire Or, where *Reh* is not procurable, quartzose pebbles ground and mixed with an equal quantity of an alkaline ash is the material commonly used. This seems to be the substance which, according to Pliny, the Greeks also employed for glass manufacture. The glass thus obtained is chiefly used in the manufacture of bangles, beads, and crackle ware for perfumes. White glass is obtained by melting broken pieces of European ware, of which small vessels are sometimes made. But glass ware is now almost entirely imported from Europe. Glass vessels of Indian manufacture produced in a few places, as at Patna, have, however, recently attracted European attention, and some of them have been highly admired for their graceful shapes and beautiful colours. In the North-Western Provinces, crackle ware is largely made in the Bijnor District. It mostly consists of bottles or flagons, which are sold to pilgrims who come from a long distance to bathe in the holy water of the Ganges, and who always carry back to their homes a bottle-ful of the sacred water. Small flasks and glasses are made at Deoband, a town in the District of Sahåranpur. These are in various colours and are very effective. Walking sticks of glass are made at Lucknow.

Leather manufactures.

One of the earliest materials of which primitive man made his household utensils is the skin of animals. In the Rig-veda leathern bags to hold water are alluded to. In the early

Vedic period, hides and skins do not seem to have been held impure, nor any articles made out of other animal substances. The feeling against taking life and using animal products either for food, or for the manufacture of dress, shoes, and other articles, originated in a later age, when the Aryans had fairly settled down in the hot plains of India and retained only a faint tradition of the cold, bleak regions beyond the high mountains from which their ancestors had come, and when, living in the midst of a profuse abundance of grains, vegetables, and fruits, they could well afford to extend to the brute creation the benefits of mercy and charity.

Even in later times, however, exigencies of social life necessitated exceptions in favour of the use of leathern articles. Samkha and Likhita declare that water raised from wells in leather buckets is pure and wholesome, and the sage Atri says that "flowing water and that which is raised by machinery are not defiled." Oleaginous substances were also allowed to be kept in leather vessels, because they had to be transported from place to place and earthen jars would not be strong enough for the purpose. At the present day, besides shoes and saddlery, these bottles and buckets are the chief manufactures of leather in this country.

In Bengal, country shoes have almost gone out of fashion, and English shoes, either imported or made in the country, have taken their place. Country-made slippers of brown leather, tanned according to indigenous process, are, however, extensively worn by the people.

In Upper India, country shoes are still almost universally used. These are made of a reddish leather with a curled front, and low sides, and covering the feet only up to a little above the toes. They are often lined with red or green velvet, and ornamented with tinsel and gold or silver embroidery. The slippers made for ladies are often very fine and artistic. Patna, Benares, Lucknow, Rámpur, Agra, Delhi, Lahore, and Jaipur are the principal seats of manufacture. Delhi sends large quantities of such shoes to other parts of India.

Cotton fabrics.

Notwithstanding the extent of their present production, cotton manufactures in the old style are in their last gasp. The few small pieces of wood and bamboo tied with shreds of twine and thread which the weaver calls his loom, and which he can as easily make himself as buy from the village carpenter, can no more compete with the powerful machinery worked in Lancashire than a village cart of western Bengal can run a race with the "flying Scotchman." Yet the wonder is, that cotton fabrics can still be manufactured with the old primitive loom all over the country. Machinery, with all its modern improvements, seems to contend in vain with a moribund industry, that must linger on as long as the worker in it has nothing better to do than to produce from it sixpence a day as the joint earnings of himself, his wife, a boy, and a girl. Another reason why Indian looms can still compete with Lancashire goods is that the European process of manufacture has not yet been

able to give to the fabrics that strength for which native manufactures have a reputation. Nor has machinery yet been able to make those gossamer fabrics for which wealthy Indians sometimes pay fabulous prices. Thus cotton is still woven all over the country—plain cloths, from the thickest carpet, called *Dari* or *Satranji*, to the thinnest one-threaded *Malmal* or *Eksuti*; striped cloths; and damask cloths with beautiful patterns.

By far the most important of the Indian cotton manufactures in an artistic point of view are the muslins. The value of the Dacca muslins consists in their fineness, to attain which an incredible amount of patience, perseverance, and skill were formerly displayed both by the spinners and the weavers. One way of testing their fineness was to pass a whole piece of muslin, twenty yards long by one yard wide, through the small aperture of an ordinary sized finger ring. Another test was the compass within which a piece could be squeezed. Tavernier relates of a Persian ambassador in Bengal having on his return home presented to his monarch a piece of Dacca muslin turban, thirty yards long, placed within a highly ornamented cocoanut shell, not larger than an ostrich egg. The best test, however, was the weight of the cloth proportioned to its size and number of threads. It is said that two hundred years ago, a piece of muslin, fifteen yards long by one yard wide, could be manufactured so fine as to weigh only 900 grains. Its price was £40. Dr. Taylor, writing in 1840, stated that

in his time a piece of cloth of the same dimensions and texture could not be made finer than what would weigh 1,600 grains. The price of such a piece of muslin would be about £10. It is generally believed that the artists of the present time have lost that manipulative skill and the delicate touch of hand by the aid of which such gossamer web was formerly produced. But there is no doubt that if a demand arises the finest fabric ever made at Dacca can still be made there. A piece of cloth ten yards long by one yard wide cannot be woven in less than five months, and the work can only be carried on during the rains, when the moisture in the air prevents the thread from breaking. It is only an oriental who can feel a pride in the possession of an article of such exquisite fineness, and an oriental alone can spend money for the purchase of a cloth of such ethereal texture. The decline of the Dacca industry is the natural result of the decline in the power and prosperity of oriental nations in Asia, Africa, and Europe. *Malmal* is the general name for all fine plain muslins, both Indian and European, and the special names of the finest qualities made at Dacca are "Presentation," "Sweet like a Sherbet," the "Evening Dew," and "The Running Water." Dr. Taylor mentioned that some thirty-six different kinds of cloth were made in his time (1840), but he must have included in the list many of the patterned and loom embroidered cloths. The chief difference by which the several qualities of Dacca muslins are distinguished at the present day consists in the number of threads in the warp, the

finest qualities having 1,800, the second 1,400, and so on, the threads being finer in proportion to their greater number. Experiments conducted by Dr. Forbes Watson established the superior fineness of the Dacca muslins to similar fabrics made in Europe.

Muslins are also made at Jahánábád, near Patna. In the North-Western Provinces, muslins of a fine quality are made at Sikandrabad in the District of Bulandshahr. These are usually fringed with gold and are used for turbans. Handkerchiefs of fine muslin cloth are also made here. Plain and striped muslins are made at a place called Mau in the Azamgarh District, which are chiefly exported to Nepal. Lucknow also makes large quantities of plain and striped, bleached and unbleached muslins, which are preferred to European cloths for purposes of embroidery. Muslins with damasked patterns are made at Benares and at Jais in the Rái Bareli District; those woven in the former place almost equal in delicacy fabrics of the same kind poduced at Dacca. They are largely used in the manufacture of country caps. Good muslins were made at Tándá in the Faizabad District, and they had a great sale when Oudh had a court of its own. Rampur produces a superior cotton damask, called *Khes*, either plain or with borders in coloured thread, or interwoven with gold thread. Cotton cloths of different kinds are woven at Moradabad, Pratábgarh, Cawnpure, Lalitpur, Sháhpur, Misáuli in Rái Bareli District, Aligarh, Mau in Jhánsi District, Mau in Azamgarh District, Sahâranpur, Meerut, &c. Agra turns out large quantities of check and

striped cotton clothes the industry giving employment to more than one thousand men. In the Punjab, muslins were formerly made in large quantities at Delhi. Mr. Baden Powell in his "Punjab manufactures" stated that "these muslin turbans are manufactured in great quantities, of Chinese cotton; about two lakhs of rupees worth are annually imported." The industry has declined in competition with European manufactures. The only place where fine muslins are now woven in the Province is Rohtak. Check muslins are produced at Gwalior. Chanderi, in the Gwalior territory, produces a superior quality of muslin. It is usually left white, but bordered with exceedingly handsome silk and gold lace. In some cases, the silk border is coloured differently on either side. Fine muslins in tasteful colours with silk and gold borders are made at Indor. These are only second in quality to those of Chanderi. Cloths of a fine texture, turbans, and other fabrics are woven at Sarangpur in the Dewas state. These are made of thread spun from the naturally-dyed yellow cotton, the product of *Gossypium herbaceum*, var. *religiosum*, commonly known by the name of Nankin cotton. These cloths are mostly bordered with silk and they have a great reputation in Central India for their excellence. Turbans and other head-dresses of a fine kind of muslin are made at Orchhá. In the Madras Presidency, the finest muslin is woven at Arni. At present the demand, however, is very small, and the industry is all but extinct. Specimens are now made only to order. In Haidrabad (Deccan) brown-coloured (*kháki*) and other coarse muslins are

made at Ráichur. In Assam, spinning and weaving are done at home, and almost every household has its own spinning wheel and its own loom. Both spinning and weaving are done by women. As in the other Provinces of India, in Assam too English yarn is rapidly taking the place of home-spun thread, except when coarse and particularly durable cloths are required. The cotton grown in the Province is, however, still largely used for domestic purposes.

Silk fabrics.

Silk, though it was originally discovered in China, did not take long to make its way to India. No mention of it is made in the Vedas. But it was common at the time when the great epics, the Rámáyana and the Mahábhárata, were composed. Fabrics are made of the mulberry silk (*Bombyx mori*, &c.), of *Tasar* silk (*Antheræa mylitta*), of *Eri* silk produced by worms fed upon castor-leaf (*Philosomia ricini*), of *Mugá* silk (*Antheræopsis assama*), of *Cricula* silk (*Cricula trifenestra*), and of Burma silk (*Attacus atlas*). Under the East India Company large quantities of mulberry silk were produced, chiefly in Bengal, and exported to Europe. The industry gradually declined since the abolition of the Company's filatures, and only a few years ago it was in an extremely deplorable state, owing, it is said, to the deterioration which Bengal silk has undergone in quality of late years. The Government of India is now making strenuous efforts to revive the trade. Mr. Wardle who was in this country a few years ago, was surprised to

find that India purchased large quantities of China silk for the more valuable fabrics made in India. He writes:—

"One thought is somewhat saddening with regard to silk in India at the present time. I have recently travelled over the greater part of India, and I have everywhere found, in all the silk centres, that for the more ornamental silk fabrics Indian silk is not used, but that the manufacturers procure their supplies from China on the one hand and Bokhara on the other. This ought not to be. Bengal is capable of producing silk to a vastly extended degree, not only enough for all the requirements of India, which are really very great, both for weaving embroidery, and minor purposes, but for a greatly increased export trade."

In Bengal the alluvial Districts in the Ganges valley are the home of the mulberry silk. Maldah, Bogra, Rájsháhi, Murshidabad, Birbhum, and Bardwán have long been famous for their silk manufactures. Sir George Birdwood states that "there is on record that in 1577 Shaikh Bhik, of Maldah, sent three ships of Máldáhi cloth to Russia by the Persian Gulf." Large quantities of silk fabrics are also made in Bánkurá and Midnapur. The hilly tracts in the west of Bengal, chiefly the Districts of Mánbhum, Singbhum, and Lohárdagá, form the centre of Tasar silk manufacture, while Eri has found a congenial home in the sub-Himalayan regions of North Bengal and Assam. The Muga silk is only produced in the last-named province.

In the N. W. Provinces silk fabrics are made at Benares and Agra. Benares embroidered silk cloths have a reputation all over India. Silk fabrics are made at Lahore, Patiala, Amritsar, Bhawalpur and many other places in the Punjab. In the Madras Presidency, fine

silk cloths are made at Bellary and many other towns. Formerly large quantities of silk fabrics were manufactured in Mysore, but the industry has declined owing to a silk worm disease. Tanna near Bombay has long been famous for its silk manufactures.

Woollen fabrics.

In India, artistic decorations have never been so profusely lavished on manufactures of sheep-wool as on cotton and silk fabrics. *Pashminá*, of which Kashmir shawls are made is not sheep-wool, but a soft down found on the goat in Tibet and Central Asia. Sheep-wool has never been in high estimation as a material for clothing. The climate of the plains is unfavourable for the production of sheep-wool of a superior quality, suitable for the manufacture of fine fabrics. Nor do woollen fabrics keep in good preservation in this climate.

The chief centre of woollen manufactures in India is of course the Punjab. Of sheep-wool manufactures the most common is the blanket. Indian blankets are not like those made in Europe ; and very little attention is paid to softening or felting them. They are coarse and rough. Blankets are not only made in the Punjab, but also in Rajputana, North-Western Provinces, and more or less in other parts of the country. Among finer stuffs, good blankets and shawls were formerly made of a soft sheep's wool obtained from Rámpur or Basáhir, a hill State in the Punjáb. Considerable quantities of woollen stuffs are now made in the Himálayan States, where the cold demands a warmer clothing than in the

plains. *Loi* is a superior kind of sheep-wool fabric largely used in the North-West as a winter wrapper. It is chiefly made at Lahore, Sirsa, Ludhiáná, and Amritsar. *Pattu* is a woollen cloth of the Punjáb Himálayas used for trousers and coats by the hill people. Gloves, stockings, neckties, *Namdás* or felts, saddle-pads, &c., are made of sheep-wool at various places in the Punjab. Cloaks are manufactured of this material in Jaipur. Bikánir serges are considered the best in Rajputana. Jodhpur makes wrappers and petticoats of sheep-wool. These are prepared by Ját and Vaishnava women in their leisure hours. Of late they have been largely purchased by Europeans.

Dyeing and calico-printing.

Until recently these were important industries in many parts of India. They have, however suffered greatly in competition with European goods. Plain dyeing is practised by a class of people called the *rangrez*, and printing by the *chhipi* or *chhipigar*. The dyers and printers are mostly Mahomedans.

Very little dyeing and printing is done in Bengal. A few dyers and printers from Behar and the North-Western provinces have opened shops in the principal towns of the province, especially in Calcutta. Besides Calcutta, the only places in Bengal where cloth-printing is carried on to some extent are the Districts of Patna, Darbhángá, and Sáran. In Calcutta, the cloths, after being stamped, are boiled in a dye solution that imparts to them a reddish tinge which is a fast colour.

Tinsel-printing is largely done in Calcutta. The art consists of stamping on the cloth, by a hand-block, a preparation of gum, and then fixing, upon the patterns thus formed in gum, false gold or silver leaf. Before stamping, the cloth is always dyed a plain colour. Gold foil is generally applied on a violet ground and silver on red. The patterns are either floral or geometrical, but always bold, striking, and tasteful.

The printing and dying industries are still carried on to a large extent in the North-Western Provinces, Punjab and Rajputana. Farukhabed and Lucknow exports large quantities of such stuffs to other parts of India.

Lace, borders and edgings.

Gold and silver wire is used in lace-making, and *Kálábatun* (gold or silver wire twisted with silk thread) in the weaving of brocades and cloths of gold and silver. Lace as understood in Europe, was not known India. Its manufacture has only been lately introduced into the country, chiefly among the native Christians of Madras. Specimens of white lace, black silk and gold lace and purely gold lace were sent from Madras to the Calcutta International Exhibition. They were made by Indian girls in the Christian Mission Schools and the work was admirable. All were of European patterns. In Upper India, lace for European use is made at Delhi, Agra, and Lucknow. The word has been transformed into *Lais*. It is made on a warp of yellow silk with gold or silver wire for woof. This lace is used for military and civil

uniforms, but European lace is now largely employed for the purpose.

Brocades and cloths of gold and silver.

Silk fabrics with raised patterns are called brocades. Gold or silver cloths—*i.e.,* silk woven with gold or silver thread—are known in India by the name of *Kinkhabs.* Silk brocades are made wherever silken stuffs are manufactured on an extensive scale. Murshidabad Benares, Bháwalpur, Multan, Ahmedabad, Surat, Yolá, Poona, and Aurangabad are the places most noted for silk brocades. *Sáris,* made at Baluchar near Murshidabad, with flowers and figures, were a short time ago higly appreciated by Bengali ladies, but these have now very nearly been ousted from the market by cheap "pine-apple" cloths imported from abroad.

Gold and silver wire and *Kálábaíun* thread are often introduced in the manufacture of the more valuable fabrics. Sometimes a few bands of gold are put at the end of a cotton muslin or a silk fabric. Punjáb *Lungis,* even the common ones, bear a few bands of gold just at a little distance from the ends. But the ends of the more costly ones are entirely woven in gold, and as these are chiefly used for turbans, one end with the gold is allowed to hang behind, with an effect at once picturesque and becoming. In Bombay, Central Provinces, and the whole of Southern India, gold is almost invariably introduced as a border in superior fabrics made of cotton or silk. In the *Kinkhábs,* however, gold or silver is worked on a silk basis all through the piece, practi-

cally making it in all appearance into a cloth of gold * or silver.

Silver brocades are made with silver wire without any gold coating. False gold and silver *Kinkhábs* are made of gilt copper wire. They are mostly imported. *Kinkhábs* were in former days extensively used by rich men. But English education is rapidly modifying the tastes of the people; and the demand for gold and silver cloths is now decreasing. Besides dresses for wealthy people, gold and silver brocades were formerly used for elephant and horse trappings. In Bengal, gold and silver brocades are made at Murshidabad, but in Northern India Benares is the chief seat of this manufacture. Its embroidered silks and brocades have long been famous all over the world. The varieties of brocades woven at Benares are numerous. Some are rose-coloured, some purple, some black, and some white. The patterns in some are spangled, while through others run scrolls of foliage and flower. There are also various other patterns. It is estimated that upwards of 2,750 workmen find employment in the manufacture of silk fabrics and gold and silver brocades in Benares. Lucknow also makes some brocades, but the industry there is not so important as in Benares. As Benares is in the north, Ahmedabad and Surat are in the south of India famous for their *Kinkhábs*. Sir George Birdwood mentions a piece belonging to the Prince of Wales "as one of the most sumptuous ever seen in Europe. It is

* By gold is meant silver wire with a gold coating.

of Ahmedabad work, rich with gold and gay with colours, and was presented to the Prince by the young Gaikwar of Baroda."

Embroidery.

Embroidery is either worked in loom or wrought by needle-work. On cotton fabrics the patterns are made of cotton, silk, or gold or silver wire twisted with silk thread called the *Kálábatun*. Coloured wool imported from Europe is sometimes interworked with cotton. Silk and woollen fabrics are embroidered with silk, wool, or *Kálábatun* thread. Some of the best gold embroidery is done on a velvet ground or on English broadcloth. Velvet is not made in India, but is imported. The heaviest kind of gold embroidery is done by fixing the fabric to be embroidered on a frame work.

Besides plain and striped muslins, embroidered fabrics of different patterns are turned out at Dacca, the embroidery being either worked by hand in the loom or done by needle. In Calcutta, large quantities of cotton embroidery, are sold among Europeans. Handkerchiefs, ladies' dresses, and clothing for children are so embroidered by men residing in the neighbouring districts. Embroidery is also done at Lucknow in the North-Western Provinces. It was introduced into that town from Bengal, and now gives employment to upwards of 1,200 persons, chiefly women and children of good families impoverished since the abolition of the Oudh Court.

The most noted of all the Punjáb embroidery are the celebrated Kashmir shawls, which, besides Kashmir

itself, are more or less worked at Amritsar, Ludhiáná, Nurpur, Gurdáspur, Siálkot, and other places in the Punjáb, where a large number of Kashmiri immigrants have settled. Mr. Kipling has made the following remarks regarding the present position of the shawl industry in the Punjáb :

"The Kashmir shawls are of two kinds: the first is the loomwoven, in which the pattern is produced in the loom itself by the aid of a vast number of small bobbins carrying the coloured *Pashm*, the shuttle and cross-threads being only used to secure the whole fabric; the second is the cheaper kind, in which the whole of the pattern is embroidered with the needle. The shawls are made in traditional forms, the *Doshála* or long shawl in pairs, the *Rumal* or square shawl, and the *Jámiwár*, or shawl always in broad stripes of alternate colour, green and white, red and blue, &c. The shawl trade is a very fluctuating one. As a rule, it may be said that the fabric is too costly in proportion to the appearance it makes. The exports for Kashmir were in value—1880, Rs.21,50,000; 1881, Rs.10,88,000; 1882, Rs.11,31,002. The introduction of the aniline dyes has done a great deal to injure the design and appearance of shawls, especially the coarse crimson known as magenta shawl. Weaving is carried on in Amritsar, where, however, the Chángthán stout wool is obtained, and not the first quality, which never leaves Kashmir. In Gujrát a little coarse shawl weaving is done, and at Núrpur also, but here, and occasionally at Siálkot, shawl edging only is made. The edge of the shawl has to be stiffer and stronger than the shawl itself, and is woven on a silk ground. There is some likelihood that the *Kinara* or edging by itself may become an article of trade, as it might be used for dress trimmings and other purposes."

In Kashmir itself shawl manufacture is now in a deplorable state. The value of the trade was in former days estimated at half a million pounds, but, now the industry is well nigh moribund. Unless means are taken by Government to preserve it, the art of weaving the finest shawls will probably be extinct.

Another important embroidered fabric of the Punjáb that has of late found great favour among Europeans is the *Phulkári* cloth. It is a silk embroidered coarse cotton cloth originally wrought by the peasant women in many districts of the Punjáb and Rajputana. The Ját women use these embroidered cloths for bodices, petticoats, &c.; they are now made into curtains in European houses. *Phulkári* cloths are largely manufactured at Amritsar, Siálkot, Montgomery, Ráwalpindi, Firozpur, Hazárá, Bannu, Hissár, Lahore, Karnál, Kohát, Derá Ismáil Khán, and Rohtak. Those made in Hazárá are probably the best.

Carpets.

The original home of carpet manufacture was the wilds north of Persia—Kurdistan, Kirman, Khorassan, &c. The climate of India is unsuited for the production of that soft wool which could be made to glow with the richest tints and with which the best carpets were made in former times in Central Asia. Nor is the moist atmosphere of many parts of this country favourable for the safe keeping of this magnificent product of art. An Eastern carpet should not be taken for a common floor-cover, but it must be looked upon as a rich tapestry on which the beautiful colours of nature are blended, as an oriental can only blend. The manufacture of such carpets is now a thing of the past. Art formerly belonged only to princes and their wealthy following. The princes of the East knew no hurry, but could wait and pay for a carpet like the one made at Warangul (in Haidrabad,

Deccan) in the sixteenth or early in the seventeenth century, containing 3,500,000 knots on its entire surface, or 400 knots to the square inch, and the patterns on which were so complicated that a change of needle was required for every knot. This carpet belongs to Mr. Vincent Robinson, and is now shewn in the Indian section of the South Kensington Museum. The public is now the patron of art and the public can generally afford to have the name, not the reality. So things for the most part are now getting to be made and sold not always for any intrinsic merit in them but in virtue of their traditionary reputation.

The manufacture of pile carpets was introduced into India by the Mahomedans, who, to whatever place they went not only encouraged the indigenous arts but brought to it the handicrafts, and occasionally the craftsmen themselves, of Bagdad, Shiraz and Samarcand. Persian carpets were, however, always, preferred to those made in India. A few specimens of these carpets still remain in India, and these are now and then reproduced with more or less accuracy. For instance, a copy of the Hirati carpet that has been in the Jaipur family for over a hundred and fifty years was, sometime ago, made in the Agra Central Prison.

Carpets are now made in many of the jails of India by prison labour. They are also made in the School of Art at Jaipur. The old Persian patterns are generally copied in the jails. New patterns, however, are sometimes invented like the *Táj* and the *Parrot* patterns of the Agra Jail. The manufacture of woollen pile carpets

as a private industry is carried on at Mirzapur, Bareilly, Moradabad, Bulandshahr, Bárabánki and Jhánsi in the North-Western Provinces, and at Multan and Amritsar in the Punjáb. Wool and silk carpets are made by private parties at Warangul and Hammámkundá in the Haidrabad State, and at Adoni, Vadavedi, and other places in the Madras Presidency. It is said that the competition of jail manufactures with those of private firms has greatly injured and, in some places, destroyed the trade of the latter. But at the same time it is doubtful whether private parties would have the capital or the courage to make copies of old carpets like the one made at the Agra Central Prison.

CHAPTER III.

MANUFACTURES ON MODERN METHODS.

Cotton mills: a Hindu pioneer.

Of the manufacturing industries of India, cotton is by far the most important. The first cotton mill in India is believed to be the Bowreah Mills near Calcutta which were started as far back as 1817. But, "according to official statements, the industry dates from 1851 when the first mill was started at Broach." * A Hindu gentleman, Rao Bahadur Ranchorlal Chotalal, was one of the pioneers of the cotton mill industry of India. "In 1848-49, he published a prospectus in a local vernacular paper of a small spinning mill of 5000 spindles with 100 looms attached ; but his townsmen [of Ahmedabad] found the project too daring, and too full of risk ; and the fact that Bombay had not yet made such a venture, was taken as conclusive of its rashness. Fortunately he found in Mr. Laudan, the owner of a ginning factory at Broach, a colleague who entered fully into his views, and the result

* The "Indian Textile Journal" Directory (1894) p. 8.

was the establishment, in 1854, of a cotton mill at Broach. Soon after the Oriental and the Manockjee Petit mills were started in Bombay, and in 1859, Mr. Ranchorlal Chotalal, with the aid of his local friends, was able to open the Ahmedahbad Spinning and Weaving Company's Mill, which began work with 2,500 spindles. This mill has been managed for the last thirtyfive years by himself, his son, and his grandson, and has now 32,000 spindles and 680 looms."*

Recent progress in cotton industry.

The following table shows ten years' progress in the cotton mill industry in India from 1882-83 :

	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.
1. Number of Mills at work each year ...	62	74	81	89	90
2. Capital employed (as far as known) Rs.	6,64.52,350	8,10,77,250	8,22,17,250	8,48,48,750	8,20,95,050
3. Persons employed No.	53,624	61,836	61,596	71,577	72,590
4. Looms ... ... No.	15,116	16,251	16,455	16,548	16,926
5. Spindles ... .. No.	1,654.108	1,895,284	2,037,055	2,198,545	2,202,602

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
1. Number of Mills at work each year ...	97	108	114	125	127
2. Capital employed (as far as known) Rs.	8,99,65,050	9,53,66,625	10,15,78,050	10,90,53,050	11,18,18,050
3. Persons employed ...	80,515	92,126	99,224	111,998	117,922
4. Looms	18,840	22,156	22,078	23,845	24,670
5. Spindles	2,375,739	2,670,022	2,934,637	3,197,740	3,272,988

* The "Indian Textile Journal" Directory (1894), p. 13.

Distribution of cotton mills.

Of the one hundred and twenty seven mills which were at work in 1891-92, no less than eighty seven were in the Bombay Presidency. Of the remainder eight were in Bengal; ten in Madras; five in the North-West Provinces; two in the Punjab; one in Central India; four in the Central Provinces; one in Rajputana; three in Hyderabad; one in Berar; two in Mysore; two in the French settlements; and one in Travancore.

Hindu share in the management of the mills.

The ownership and management of nearly half the mills are in the hands of the Hindus. Among the agents and owners, 26 are stated to be Europeans, 18 Parsees, 64 Hindus, 7 Mahomedans, and 3 Jews.

Export trade in cotton.

"The export trade has been with the China markets, though it has of late fallen off to a considerable extent, owing in the first instance to oversupply, and in the second, to the disturbance in the rate of exchange, consequent upon the closing of the mints in June, 1893. The total shipment of yarns to China during the year 1893 was 311,055 bales of 400 lbs. each while in 1892 it amounted to 407,260 bales of 400 lbs. each. The coarser counts of yarn and cloths also find a sale in almost every part of India, and in Aden, Singapore, Rangoon, and Zanzibar." *

Expansion of cotton imports since 1858.

The following table showing the value of imported cotton manufactures for each year from 1858 to 1892, exhibits their gradual expansion down to 1886. Since

* The "Indian Textile Journal" Directory (1894), p. 9.

that date, however, further expansion has suffered a check.

Year.		Value of cotton twist and yarn in tens of rupees.		Value of cotton goods in tens of rupees.
1857-58	...	943,920	...	4,782,698
1858-59	...	1,714,216	...	8,088,927
1859-60	...	2,047,115	...	9,651,813
1860-61	...	1,748,183	...	9,309,935
1861-62	...	1,472,484	...	8,772,916
1862-63	...	1,270,301	...	8,360,229
1863-64	...	1,529,001	...	10,416,662
1864-65	...	2,191,440	...	11,035,885
1865-66	...	1,961,144	...	11,849,214
1866-67	...	2,572,700	...	12,524,106
1867-68	...	2,698,350	...	14,999,917
1868-69	...	2,779,934	...	16,072,551
1869-70	...	2,715,370	...	13,555,846
1870-71	...	3,357,393	...	15,687,476
1871-72	...	2,424,522	...	15,058,811
1872-73	...	2,628,296	...	14,605,953
1873-74	...	2,628,959	...	15,155,666
1874-75	...	3,157,780	...	16,263,560
1875-76	...	2,794,769	...	16,450,212
1876-77	...	2,733,514	...	15,991,719
1877-78	...	2,850,403	...	17,322,313
1878-79	...	2,779,772	...	14,126,784
1879-80	...	2,745,306	...	16,915,511
1880-81	...	3,699,177	...	22,910,717
1881-82	...	3,222,065	...	20,772,099
1882-83	...	3,378,190	...	21,431,872
1883-84	...	3,465,943	...	21,642,338
1884-85	...	3,360,420	...	21,197,414
1885-86	...	3,172,083	...	21,110,545
1886-87	...	3,318,377	...	25,146,508
1887-88	...	3,581,906	...	23,924,467
1888-89	...	3,746,797	...	27,764,508
1889-90	...	3,482,529	...	26,391,399
1890-91	...	3,768,362	...	27,241,987
1891-92	...	3,514,620	...	25,174,852

Cotton ginning &c. and Hosiery factories.

Besides the cotton spinning and weaving mills, there are nearly four hundred cotton ginning, cleaning and pressing mills, the proprietorship and management of a large number of which are in the hands of the Hindus.

There are also five Hosiery factories in Bombay, of which two appear to be under Hindu management. A Hosiery factory under Hindu management is about to be started in Bengal.

Jute-mills.

The progress in the Jute industry since 1872 has been considerable. The first jute mill is believed to have been started about 1857. In 1872, there were only five jute mills. The number rapidly rose to twenty by 1882. The following table exhibits the progress of the industry since that year :

	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.
1. Number of Mills at work	20	23	24	24	24
2. Capital employed (as far as known) Rs.	2,33,70,000	2,50,70,000	2,69,70,000	2,69,70,000	2,84,70,000
3. Persons employed No.	42,797	47,868	51,902	47,640	49,015
4. Looms ... .. No.	5,633	6,139	6,926	6,683	6,911
5. Spindles ... ... No.	95,737	112,650	131,740	126,964	135,593

	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.
1. Number of Mills at work	25	26	*26	*26	27
2. Capital employed (as far as known) Rs.	3,04,45,000	3,01,95,000	3,02,15,000	3,13,20,000	3,13,20,000
3. Persons employed ...	56,007	59,722	59,806	61,915	66,333
4. Looms	7,389	7,819	8,001	8,101	8,695
5. Spindles	146,302	152,667	155,926	161,845	1,74,156

* The figures in these two columns as given in the Statistical Tables for 1893 are slightly different.

The jutemills produce gunny bags, cloth and yarn. They are mostly owned by joint-stock companies, and, as far as we are aware, are almost entirely managed by Europeans. * Besides the mills, however, there are some fortyfive jute pressing and baling factories in different parts of India, a great many of which are owned and managed by Hindus. The following table shows the expansion in the export trade of the Bengal jute manufactures (gunny bags) since 1870:

Year.		Number of bags exported.		Value in tens of rupees.
1869-70	...	6,441,863	...	....
1870-71	...	6,382,554	...	....
1871-72	...	5,112,421	...	....
1872-73	...	6,105,275	...	....
1873-74	...	6,594,694	...	....
1874-75	...	8,010,824	..	....
1875-76	...	19,263,513	...	....
1876-77	...	32,859,545	...	712,119
1877-78	...	26,406,539	...	736,011
1878-79	...	45,354,133	...	1,064,832
1879-80	...	55,908,731	...	1,170,970
1880-81	...	52,386,227	...	1,119,146
1881-82	...	42,072,819	...	1,096,562
1882-83	...	60,737,651	...	1,453,284
1883-84	...	63,645,984	...	1,304,390
1884-85	...	82,779,207	...	1,521,323
1885-86	...	63,760,546	...	1,103,094
1886-87	...	64,570,157	...	1,139,321
1887-88	...	74,367,620	...	1,714,404
1888-89	...	99,790,587	...	2,500,417
1889-90	...	97,415,895	...	2,740,059
1890-91	...	98,749,416	...	2,431,361

Woollen mills.

The first woollen mill in India was started at Cawnpore in 1876. Since then, two mills have been started at Bombay, one in the Gurudaspur district in the Punjab, and one in the Bangalore district in Mysore. All these mills are own-

* The Government publications do not give any particulars as to the management of the mills or the nationality of their owners.

ed by joint stock companies. They employ daily, in the average, 2582 hands and produce blankets, serges, flannels, broadcloth &c.

Paper mills.

The paper-industry on modern methods has sprung up only since 1862, when the Girgaum paper mill was started at Bombay. At the end of 1891, there were at work eight paper mills—three in the Bombay Presidency, three in Bengal, one at Lucknow, and one at Gwalior. Of these two belonged to private parties, and the rest to joint stock companies with an aggregate nominal capital of about fortyfour lakhs and a half. The Bally mill, the largest paper concern in India, produces printing and cartridge papers of sorts, cream-laid paper, and blotting and brown papers. The average daily number of hands employed by the mills in 1891 was 2,733. The outturn for that year is estimated at 26,834,692 lbs. valued at Rs. 42,70,394. The raw material used by the mills consists of gunny cuttings, rags, cotton, straw, grasses, waste-paper &c.

Flour and oil mills.

The flour and oil industries which require a comparatively small outlay are in great favour with the Hindus. There were, in 1891, fiftyone flour mills in India. Of these eighteen were in the province of Bombay, two in Sindh, one in Madras, twentytwo in Bengal, two in the North Western Provinces and Oudh, and six in the Punjab. Of these fourteen belonged to joint-stock companies with mostly

Hindu shareholders; the greater majority of the remainder were private Hindu concerns. There were in 1891, sixtythree oil mills in India, of which six belonged to joint stock companies, and by far the greatest majority of the remainder were owned and managed by Hindus. In Calcutta and its vicinity no less than twentythree were under Hindu management.

Glass factory.

Although the value of imported glassware was over seventy lakhs of rupees in 1891-92, India as yet possesses only one glass factory conducted on European methods. It is situated near Calcutta and owned by a joint-stock company called the Pioneer Glass Manufacturing Company, of which the Shareholders and Directors are mostly Hindus. The nominal capital of the company is stated to be three lákhs.

Ice factories.

There were, in 1891, twenty six ice factories in India of which fourteen belonged to joint stock companies. Of the remainder a few were under Hindu management.

Iron foundries.

In olden times the Hindus must have possessed very large iron foundries. "The famous iron pillar at the Kutab, near Delhi, indicates an amount of skill in the manipulation of a large mass of wrought iron, which has been the marvel of all who have endeavoured to account for it. It is not many years since the production of such a pillar would have been an impossibility in the largest foundries

in the world, and even now there are comparatively few where a similar mass of metal could be turned out. The exposed portion of this pillar is 22 feet. The depth under the surface is 20 inches, so that the total length of the pillar is 23 feet 8 inches. "Just below the surface it expands into a bulbous form, 2 feet 4 inches in diameter, and it rests on a gridiron of iron bars which are fastened with lead into the stone pavement. The diameter of the pillar itself is 16·4 inches at base and 12·05 inches just below the capital, which is 3½ feet high. The above dimensions indicate a weight exclusive of the capital and the base of 5·7 tons, so that the total weight must exceed 6 tons.

Analyses of the iron have been made both by Dr. Percy, late of the School of Mines, and Dr. Murray Thompson, of Rurki College, who have found that it consists of pure malleable iron without any alloy. It has been suggested that this pillar must have been formed by gradually welding pieces together: if so, it has been done very skilfully, since no marks of such welding are to be seen." * With regard to the age of the pillar Mr. Fergusson observes: † "There is an inscription upon it, but without a date. From the form of its alphabet, Prinsep ascribed it to the 3rd and 4th century; Bhau Daji, on the same evidence, to the end of the 5th or beginning of the 6th century. The truth probably lies between the two. My own con-

* "Economic Geology of India." pp. 338-339.

† "History of Indian and Eastern Architecture" p.508.

viction is that it belongs to one of the Chandra Rajas of the Gupta dynasty, either consequently, to A.D. 363 or A.D. 400. Taking A.D. 400 as a mean date—and it certainly is not far from the truth—it opens our eyes to an unsuspected state of affairs to find the Hindus at that age capable of forging a bar of iron larger that any that have been forged even in Europe up to a very late date, and not frequently even now. As we find them, however, a few centuries afterwards using bars as long as this *lát* in roofing the porch of the temple of Kanaruc we must now believe that they were much more familiar with the use of this metal than they afterwards became. It is almost equally startling to find that, after an exposure to wind and rain for fourteen centuries, it is unrusted, and the capital and inscription are as clear and as sharp now as when put up fourteen centuries ago."

At the present day, nearly all the larger foundries are owned and conducted by Europeans on modern methods. The largest iron-foundry is that of Burn and Co. at Howrah, near Calcutta, which, in 1891, employed an average number of 1650 persons daily, and turned out goods valued at Rs. 13,50,000.

Potteries.

There are only two potteries on a large scale, both of which belong to Burn and Co., one at Raniganj (Bengal), and the other at Jubbulpore (Central Provinces). In 1891, the Raniganj Pottery Works employed an average number of 1,100 persons daily, and produced pipes, tiles, various ornamental and other works valued at Rs. 1,83,000.

Soap factories.

There are two soap-factories conducted on European methods, both of which are at Meerut in the North-Western Provinces. They are owned by joint stock companies with a large body of Hindu shareholders. The North-West Soap Company produced, in 1891, nine thousand eight hundred and eight maunds of soap valued at Rs, 1,23,507.

Sugar factories.

There are over a hundred sugar factories and refineries noted in the "Statistical tables for British India"—some ninety four in Bengal, five in the Madras Presidency, one in the North-Western Provinces and one in the Punjab. Of these the last seven and one or two in Bengal are conducted on a large scale under European supervision. It is only the smaller factories that are in the hands of the Hindus. The imports of foreign sugar have considerably increased within the last decade, and must have told unfavourably upon the expansion of the sugar industry. In 1883-84, the quantity imported was 736,909 cwts., whereas, in 1891-92, it was 2,213,825 cwts. The exports of sugar, however, have not declined very seriously; the quantity exported in 1883-84 was 1,777,157 cwts., and, in 1891-92, it was 1,137,186 cwts.

Tanneries.

There were, in 1891, forty three tanneries in India. Of these the largest is Cooper Allen and Company's Army Boot factory at Cawnpore which employs an average number of 2,500 persons daily. The only large tannery which is under Hindu management is Stewart Tannery and Leather factory at Agra, which employs an average number of

113 persons daily. Its annual outturn for 1891 was valued at Rs. 81,753.

Rope-making and other industries.

There have also sprung up various other industries, such as rice cleaning, bone-crushing, rope making, and brewing industries, in which steam-power is emloyed. These are, however, almost exclusively in European hands.

Minor industries.

In connection with the Annual Flower Show of the Institution for Practical Agriculture and Horticulture at Cossipore near Calcutta, an Exhibition of articles, manufactured with the aid of machinery or according to the scientific methods as followed in Europe, was held under the auspices of the Indian Industrial Association of Bengal. The following list of exhibits, with the awards made upon them by the jurors, will show the nature of some of the minor industries which are springing up among the Hindus of Bengal.

Exhibits.	Medal.	Certificate.
Pharmaceutical preparations ...	Gold ...	1st Class.
Pharmaceutical preparations ...	Gold ...	2nd ,,
Maps	,, ...	1st ,,
Locks	Silver ...	2nd ,,
Locks	,, ...	1st ,,
Scientific apparatus	Gold ...	1st ,,
Twilled and ornamental silk fabrics	Silver ...	1st ,,
Ivory carvings	,, ...	1st ,,
Glazed earthen ware	Bronze ...	2nd ,,
Match	Silver ...	1st ,,
Paddy husking machine and paddle boat.	Gold ...	1st ,,
Preserved fruits in their natural colour.	Silver ...	2nd ,,
Surgical Instruments	Gold ...	1st ,,
Brass figures	Silver ...	1st ,,

Exhibits.	Medal.	Certificate.
Plain and check silk fabrics ...	Silver ...	2nd class.
Papier mache Toys	,, ...	1st ,,
Varnish	Bronze ...	2nd ,,
Varnish	Silver ...	1st ,,
Lozenges	,, ...	1st ,,
Lamp (new design)	Silver ...	1st ,,
Wax flower	Silver ...	2nd ,,
Toyship	Bronze ...	2nd ,,
Harmoni-flute	Silver ...	1st ,,
Harmoni-flute	Gold ...	2nd ,,
Harmoni-flute	Silver ...	2nd ,,
Photo pictures	,, ...	1st ,,
Ink	Silver ...	1st ,,
Ink for polishing shoes	,, ...	1st ,,
Ink	Gold ...	1st ,,
Whistles	Silver ...	2nd ,,
Steel trunks and Lamp (signaller's)	,, ...	1st ,,
Toys	Bronze ...	2nd ,,
Scales	Gold ...	1st ,,
Biscuits	,, ...	1st ,,
Biscuits	Gold ...	2nd ,,

CHAPTER IV.

MINING INDUSTRIES.

Mining in ancient India: Megasthenes.

From the way in which gold and iron are mentioned in the Rigveda,* it may be inferred, that the Indo-Aryans of the early Vedic period were familiar with those metals. We have no information, however, as to whence they were obtained. The first authentic mention of the mineral resources of India is by Megasthenes (about 300 B. C.) " While the soil [of India]" says he " bears on its surface all kinds of fruits which are known to cultivation, it has also underground numerous veins of all sorts of metals, for it contains much gold and silver, and copper and iron in no small quantity, and even tin and other metals, which are employed in making articles of use and ornaments, as well as the implements

* Muir's "Original Sanskrit Texts" Vol. V. (1884), pp. 87, 88; 149-151; &c.

and accoutrements of war."* Megasthenes gives no information as to the localities whence these metals were procured, except in the case of gold, mines of which are located by him in an elevated plateau inhabited by a people called the Derdai† who are identified with the Dards, "wild and predatory tribes dwelling among the mountains on the north-west frontier of Kashmir, and by the banks of the Indus." From this description, it would seem, that the gold used in Northern India at the time of Megasthenes was chiefly procured from Thibet.

Precious stones and metals in later Sanskrit literature.

Household utensils made of copper, iron, tin, lead gold and silver, and ornaments made of the precious metals are mentioned in the Manusamhitá, but it gives no particulars as to the localities they were obtained from.

Coming to later Sanskrit literature, we find frequent mention of precious stones and metals.‡ As far as we are aware, however, it is only in the Brihatsamhitá of Varáha Mihira,§ that detailed information is afforded about any of the gems. The most common

Diamonds mentioned in the Brihatsamhitá.

* "Ancient India, as described by Megasthenes and Arrian," translated by J. W. McCrindle, p. 31. See also "Ancient India as described by Ktesias," translated by J. W. McCrindle, p.p. 16, 17, 68, 69.

† These are identified with the Dardæ of Pliny and the Daradas of Sanskrit literature.

For descriptions of "Gold-digging ants" and rational explanations of them, see "Ancient India," translated by McCrindle, pp. 94 *et seq*, and "The Indian Antiquary" Vol. IV, pp. 225-232.

‡ In the *Mrichhakati*, skilful artists are mentioned as examining pearls, topazes, sapphires, emeralds, rubies, &c.

§ An astronomer who lived in the first half of the 6th century A. D.

gems, he says, are: "Diamond, sapphire emerald, agate, ruby, bloodstone, beryl, amethyst, vimalaka, quartz (?), crystal, moongem, sulphur-hued gem (?), opal, conch, azure stone, topaz, Brahma stone, Jyotirasa, chryssolite (?), pearl and coral. The diamond found on the bank of the Vená is quite pure; that from Kosala country is tinged like Sirisa-blossom; the Surashtrian diamond is somewhat copper red; that from Supara, sable. The diamond from the Himálaya is slightly copper coloured; the sort derived from Matanga shows the hue of wheat blossom; that from Kalinga is yellowish, and from Pundra grey." *

The Vená, in this passage, is identical with the Weingangá, on a tributary of which stood the ancient mines well known under the name of Wairágarh, a town distant about 80 miles to the south-east of Nagpur. † Surástra is Surat; it was merely a port whence the gem was exported. Matanga and Kalinga probably included the Kistna and the Godaveri or Golconda diamond localities. ‡ Mahá Kosala identified with Berar and the Nagpur country probably included the ancient diamond mines of Sambalpur. Pundra comprised North-

* "The Brihat Samhitá" translated by Dr. H. Kern. Journal of the Royal Asiatic Society, New Series. Vol. VII, pp. 125-126.

† The diamond mines of Wairágarh or Bírágarh are mentioned in the *A'in-i-Akbari* (Jarrett's Translation, Vol. II p. 230).

‡ Telingana which comprises many of these localities is supposed by Cunningham to be "only a slightly contracted form of Tri-Kalinga." ("Ancient Geography of India" p. 519).

ern Bengal. It extended to the foot of the Himálayas, and possibly gave its name to precious stones other than diamonds obtained from those mountains.

From the passage in the Brihatsamhitá it appears, that nearly all the important diamond mines of India were worked about the beginning of the sixth century A. D. As far as we are aware, however, there is no information about the methods of mining in the ancient Sanskrit literature, nor any which localises the precious and other metals even in the vague manner of the Brihatsamhitá. The fact is, mining and smelting in ancient, as in modern India, were carried on by lower class Hindus and aborigines, * who were beneath the notice of the Bráhman authors.

Ancient mines of gold, silver &c.

We have, however, abundant indirect evidence of the working of gold, silver, copper, and iron mines in ancient India on a rather extensive scale. The statement of Megasthenes with regard to the mineral resources of the country has been quoted already. Ktesias refers to the silver mines of India, which, he says are deeper than those in Bactria. "Gold also" he says "is a product of India. It is not found in rivers and washed from the *sands*" but is found on mountains. Pliny (first century A. D.)

* Iron-ore is mined and smelted bythe aborigines especially of Dravidian extraction. The mining and smelting of copper in the Himalayas are conducted by Hinduised aborigines. The Panna mines are worked by Gonds and Kols. The higher class Hindus act as middlemen. They supply capital, and enjoy the lion's share of the profits; but, as regards technical knowledge of mining and smelting, they possess none.

referred to the country of the Nareœ, who are identified with the Nairs of Malabar, as comprising numerous mines of gold and silver.

More satisfactory evidence than all this is the discovery of extensive and numerous ancient mines of gold, copper, and silver. The ancient gold mines in the Wynaad region, "indicate different degrees of knowledge in the miner's art. They consisted of 1, quarrying on the outcrops of veins; 2, vertical shafts; 3, adits; 4, vertical shafts with adits; 5, shafts on underlie. Among these the most remarkable are the vertical shafts; they are even when in solid quartz sometimes 70 feet deep, with smooth and quite plumb sides. What the tools were which enabled the miners to produce such work in hard dense quartz no one appears to be able to suggest. The fragments of stones obtained from these various mines were pounded with hand-mullers, the pounding places being still seen, and the pounded stone was then, it is believed, washed in a wooden dish and treated with mercury." †

Mining in recent times: Precious stones.

India is said to have supplied the whole world with diamonds till A. D. 1728 when the diamond mines of Brazil were opened. At the present day, the only diamond mines which are regularly worked are those of Panna in Bundelkhand. In Akbar's time, the value of the annual

* "Ancient India as described by Ktesias," translated by J. W. McCrindle pp. 16-17.

† "Economic Geology of India" pp. 182-183.

outturn of these mines is said to have been eight lakhs of rupees. In the beginning of the eighteenth century, the produce was estimated at one lakh and twenty thousand rupees of which the Panna Raja received one fourth. The outturn in recent years is stated to have been much less than formerly. An European Company have recently been prospecting for diamonds in the territory of the Nizam, in which some of the ancient diamond mines are situated; but, the result does not yet appear to be promising.

The other precious stones which are still mined and worked by Hindus on indigenous methods are garnet, agate, onyx and carnelian. In the Kishengarh state, in Rajputana, there are rather extensive mines from which good garnets are obtained. The Raja is said to derive a large revenue from them. There are also garnet mines in the Jaipur and Udepur states. With regard to agate, onyx and carnelian "though none of these exactly come under the denomination of precious stones, still, when wrought into ornamental objects, they have sometimes commanded very high prices. In the art of cutting and polishing them the lapidaries of India have long been renowned,—for so long indeed that some of the very earliest allusions to the country are connected with this particular art. It is probable that the polished and cut pebbles of India have been spread over the world to an extent of which few people are conscious. It is said that the pebbles which the tourist or visitor is induced to buy at any well-known seaside and other resorts in Europe, as mementos of the places, have

not only been originally produced but have been cut and polished in India. If it be so, the trade is a more creditable one than that which sends sham jewels to Ceylon, because the stones are really what they pretend to be true pebbles, and they are often extremely beautiful objects. It has sometimes been thought that in the name brooch the source of the pebbles which were first employed for the purpose is recorded, but the derivation is said to be from the French *broche*, a spit or skewer. From Barygaza, the modern Broach, the famous onyx and murrhine cups of the early Greeks and Romans were obtained, it is believed. Nero is said to have paid 300 talents or £55,125 for one of the small cups made of murrhine or carnelian (?), which was probably not very different in any respect from those to be obtained in Bombay at the present day."*

There are many places in the Central Provinces and the Bombay Presidency where the minor precious stones mentioned above are found. Of these the best khown are Jabbalpur and Ratanpur. The Ratanpur mines situated in the Rewakantha District (Bombay Presidency) are said to have afforded occupation to the lapidaries of Broach and Cambay for the last two thousand years. The average annual produce of these mines for 1878 was estimated at seventy thousand rupees.

Gold and silver.

Gold-washing still affords a more or less supplemental means of subsistence to a small class of lowcaste Hindus in different parts of

* "Economic Geology of India." p 504.

India. But gold-industry, worth the name, is at present, carried on with European capital and under European management in Mysore and the Wynaad. The output of the Mysore mines for 1889 was 78,649 ounces, valued at Rs. 43,93,150, and that for 1892 was estimated at 163,187 ounces valued at Rs. 89,60,210. Except probably at a place in the Kudapa District (Madras Presidency), silver is not now known to be mined for anywhere else; and there too it is extracted from galena in a very petty scale, and by a tedious and wasteful process.

Copper.

Though there are numerous ancient copper-mines of an extensive character in various parts of India, the mining and smelting of copper on the indigenous methods are now carried on in a small way only in outlying tracts where the heavy cost of transport places the imported copper at a disadvantage.

Attempts to work copper ores on modern methods.

Various attempts have been made by Europeans from time to time to work the copper ores of India especially in the Nellore district (Madras), and in the Singbhum district (Bengal). The latest attempt is that of a Joint Stock Company with a capital of £185,000 to work the copper-ores of Baragunda in the Hazaribagh district. The outturn of the Baragunda mines for 1890 was estimated at 305 tons valued at Rs. 2,34,000.

Indigenous copper-mining.

The following are the more noteworthy among places where copper-ores have been until recently, or are still mined and smelted in a petty manner: Daribo in the Alwar state;

Singhana,* Khetri, and Babai in the Jaipur state; Dhanpur, Dhobri and Pokhri in Kumaun and Garhwal districts; and at various places in Nepal and Sikkim. An idea of the petty scale in which these mines are generally worked will be obtained from the fact, that the annual produce of the Daribo mine fifteen years ago was only 3 tons 8 cwts., and even that amount is stated to have been diminishing owing to the influx of imported copper.

Deep-mining is not practised owing chiefly to the want of suitable apparatus for draining the mines. At Pachikhani, the only place where copper-ores were found by the writer, in 1891, to be worked on a tolerable scale in Sikkim, the deepest mine went down to a depth of about 55 feet only; and water had collected to such an extent even at this depth, that the miners were talking of abandoning it, though the ore there was very rich.

The mines are long meandering passages averaging about a yard or so in height and width. The tools generally used are an iron hammer and a pointed chisel; small picks also are sometimes used. The ore (usually copper-pyrites) is pounded, washed, and then made up into small balls with cowdung. After drying, these balls are roasted. The roasted balls are pow-

* Large quantities of blue vitriol, alum, and copperas are manufactured from the decomposed slate and refuse of the Singhana mines. The slates and refuse are steeped in water, which is afterwards evaporated, when the blue vitriol is first crystallised out, then the alum, and lastly the copperas. ("Economic Geology of India," p. 261).

dered ; and the powder is smelted in a closed furnace about a foot and a half deep.

The following figures give the quantity and value of imported copper since 1876 :

Year		Quantity (cwt.)		Value (in tens of rupees)
1875-76	...	236,016	...	1,207,500
1876-77	...	272,353	...	1,398,102
1877-78	...	320,103	...	1,498,175
1878-79	...	289,853	...	1,284,169
1879-80	...	386,173	...	1,620,155
1880-81	.	381,683	...	1,620,017
1881-82	...	338,108	...	1,467,462
1882-83	...	450,098	...	1,938,376
1883-84	...	530,226	...	2,207,841
1884-85	...	552,420	...	2,070,018
1885-86	...	652,973	...	2,093,840
1886-87	..	615,049	...	1,994,009
1887-88	...	532,635	...	2,001,928
1888-89	...	8,490	...	563,313
1889-90	...	568,961	...	2,222,354
1890-91	...	446,448	...	1,813,591
1891-92	...	511,088	...	2,089,024

Iron.

The indigenous iron industry has been well nigh crushed out of existence by imported iron. It now affords only a precarious and supplementary means of subsistence to a small class of Hinduised and other aborigines in outlying tracts, especially in the wilds of Central India and the Central Provinces. The following extracts from a paper by the writer bearing upon the iron industry in a portion of the Jabalpur district (Central Provinces) applies generally to the industry as carried on at present in other parts of India.

Indigenous method of smelting iron-ore.

"The furnace, as usual, is of a most primitive type. It is about 4 feet 6 inches in height. It is built of mud, with which some straw is mixed. The making up of the furance costs a rupee or so. The bellows which supply the blast are

about a foot and a half high when stretched. They are made up of goat's skins obtained from Jabalpur at a cost of Rs. 4 per pair : the making-up costs a rupee. A pair of bellows lasts one full season (November to May). The entire cost of the furnace and bellows and other requisites amount probably to not more than Rs. 7. The blast is supplied through a pair of clay tuyeres, which are renewed every day. The fuel used is charcoal. The furnace is worked for 12 hours, from about 8 in the morning to late in the evening. Two men are required to work it, one at the bellows and the other to put in ore and fuel and let out the slag. Their wages vary from 2 to 3 annas each per day. The furnace is first filled up with charcoal. When it gets well heated, ore is let down through a hole at the top one small basketful at a time weighing from 5 to 7 seers. Some 25 to 30 such basketsful (or $3\frac{1}{2}$ to $4\frac{1}{2}$ maunds) of ore are consumed by a furnace in one day." *

Attempts to work iron-ores on modern methods: The Barákar Iron works.

There are very rich and extensive iron ores in various parts of India especially in the Madras Presidency and the Central Provinces: and attempts have from time to time been made by Government and private parties (Europeans) to work the ores on a large scale on modern methods. The attempts, however, have all ended in failure except in the case of the Barakar Iron Works. The working of the excellent iron ores of India on modern methods is placed under great disadvantage, as they are usually remote from coal of the desired quality. But at Barákar, in Bengal, the close proximity of such coal to abundant iron ores of fair quality led to the establishment, in 1874, of an European Company under the name of the "Bengal Iron Company." The Company, however, failed in 1879,

* "Records of the Geological Survey of India." Vol. XXI (1888), pp. 87-88.

owing chiefly, it is supposed, to the initial error of starting with insufficient capital which amounted to £100,000 only. Three years later, the property was bought over by Government; and under the management of Ritter Von Schwartz, the concern proved successful. It has again passed recently into the hands of an European Company, who have made arrangements to carry on the works on an enlarged scale. The success of the Company appears to be assured. In 1891, the daily average of persons employed at the Barákar Iron works was 821; and the out-turn (pig-iron) was 11,822 tons valued at Rs. 6,19,508.

Recent attempt to start iron works in Mysore.

In Southern India various attempts have from time to time been made to work the excellent iron ores which abound there on a somewhat large scale, with wood-fuel; but they have ended in failure. The last attempt of the kind of which we have any information is by a Madrasi gentleman Dr. Dhankoti Raju. In a paper, which he read at the Industrial Conference held at Poona in August, 1891, he said, that he had visited England, France, Italy, Belgium, Germany, Denmark, Norway, Sweden, and Russia, with a view to study the iron-industry as carried on in those countries; and that he had been granted important concessions by the Government of Mysore for the establishment of iron and steel works in that Province, "on a pretty large scale and on modern scientific principles." He further said, that he had imported machinery from Europe, and made preliminary arrangements for the establishment

of the works.* We have not, however, had any information about the result of the enterprise. The following figures show the gradual increase of imported iron (excluding steel, machinery and millwork, hardware and cutlery) since 1858 :

Year.	Quantity in tons. †	Value in tens of rupees.
1857-58	....	494,094
1858-59	....	1,107,222
1859-60	....	571,839
1860-61	....	454,438
1861-62	....	603,222
1862-63	....	678,312
1863-64	....	724,706
1864-65	....	586,712
1865-66	....	488,374
1866-67	....	784,888
1867-68	....	1,461,300
1868-69	....	1,425,655
1869-70	....	1,188,086
1870-71	....	799,895
1871-72	....	841,490
1872-73	....	752,576
1873-74	....	795,516
1874-75	....	1,247,348
1875-76	101,192	1,424,598
1876-77	112,559	1,528,406
1877-78	121,886	1,435,561
1878-79	118,265	1,446,015
1879-80	105,558	1,229,385
1880-81	133,280	1,547,541
1881-82	122,626	1,414,384
1882-83	157,597	1,870,494
1883-84	177,183	2,140,491
1884-85	180,114	2,014,909
1885-86	174,658	1,934,706
1886-87	164,019	1,782,990
1887-88	216,079	2,447,395
1888-89	200,140	2,515,179
1889-90	180,420	2,414,317
1890-91	193,828	2,562,307
1891-92	184,025	2,321,283

* Report of the first Industrial Conference held at Poona, pp. 94-96.

† It is not stated in the "Statistical Abstract" whether the quantity includes manufactured articles or not.

Coal: the present condition of the industry.

Coal-mining is quite a new industry in India. The importance of coal began to be felt with the spread of Western civilisation with its railways, mills,and workshops; and coal-mining has been making rapid progress since 1858. In 1857-58, the total output of coal in India was 293,443 tons. In 1890, it was no less than, 2,168,521 tons. The following tables show the progress made in the Indian coal-mining industry from 1881 to 1891:

	1881.	1882.	1883.	1884.	1885.
Number of collieries worked..	47	55	61	66	68
Persons employed	—	20,051	23,172	24,541	22,745
Quantity of coal produced in tons	3997,730	1,130,242	1,315,976	1,397,818	1,294,221

	1886.	1887	1888	1889	1890	1891
Number of collieries worked	70	68	67	72	82	87
Persons employed ..	24,794	28,438	29,301	29,953	32,971	34,902
Quantity of coal produced in tons ...	1,388,487	1,564,063	1,708,903	1,945,354	2,168,521	2,328,517

Of the Indian coal fields those of Bengal are the most important. In 1891, of the 87 Indian collieries employing 34,902 labourers (men, women, and children) no less than 77 were located in Bengal, which employed 24,834 persons; more than two-thirds of the total produce of 1890 was contributed by Bengal. Of the remaining collieries, one was in the Punjab (Dandot); three in the Central Provinces (Mohpani and Warora);

three in Assam (Lakhimpur District); one in Rewa State; one in Nizam's territory; and one in Beluchisthan.

Hindus in the coal industry.

Though a Hindu * was one of the chief promoters of the oldest and richest coal company in India, the Bengal Coal Company, there are, as far as we are aware, only three large coal properties at the present day which are owned by Hindus. The great majority of the more considerable mines are worked with European capital and under European supervision.† Of the three large mines under Hindu management, that at Siarsol, opened in 1845, turned out, in 1891, 45,030 tons, and employed 823 men, women, and children; and the Jemari colliery, started in 1854, yielded, in 1891 32,296 tons. There is also a large number of small collieries in Bengal owned and managed by Hindus.

The following figures give the imports of coal since 1876:—

Year.		Quantity in tons.		Value in tens of rupees.
1875-76	...	383,427	...	665,535
1876-77	...	519,749	...	931,710
1877-78	...	601,257	...	1,008,155
1878-79	...	475,960	...	889,477

* Dwáraka Nath Tagore. His biographer, Kissory Chand Mitter, says that he established it with the assistance of Mr Deans Campbell. ("Life of Dwarka Nath Tagore"—p. 108).

† Nearly all the smaller mines in Bengal, however, are owned and managed by Hindus. They are generally worked on modern methods, but on a small scale. From information courteously supplied by Mr. R. C. Dutt, Commissioner, Burdwan Division, we are able to state, that there were no less than thirty such mines in that Division, in 1893.

Year.		Quantity in Tons.		Value in tens of Rupees.
1878-80	...	587,928	...	1,138,208
1880-81	...	683,768	...	1,239,855
1881-82	...	637,124	...	1,020,044
1882-83	...	628,824	...	1,019,883
1883-84	...	708,358	...	1,163,790
1884-85	...	741,129	...	1,267,213
1885-86	...	790,930	...	1,308,415
1886-87	...	765,668	...	1,316,615
1887-88	...	848,878	...	1,663,911
1888-89	...	833,478	...	1.907,213
1889-90	...	601,478	...	1,308,589
1890-91	...	784,664	...	1,543,442
1891-92	...	736,971	...	1,250,493

Comparing these figures with those given above with regard to the progress of the Indian coal-mining, it will be seen how the development of the latter has kept the imports down. The increased demand due to the expansion of industries on European methods and the extention of railways has been almost entirely met by the indigenous coal ; and strenuous efforts are being made to drive the foreign coal out of markets where it still holds its own.

Salt.

Salt is obtained by evaporation at various places on the Madras, the Bombay, and the Orissa coast, and from some Salt Lakes in Rajputana of which the best known is the Sambhur Lake. The produce of the Sambhur Salt Lake, in 1891, was 2,162,130 maunds valued at Rs. 3,73,868. Salt is also obtained by mining in the Punjab, which contains enormous deposits of rock-salt. The largest and best known of the Punjab salt mines are the Mayo mines in the Salt-range. The mines were formerly

much more numerous, but they "merely consisted of small openings at first, which were afterwards unsystematically enlarged, until they became dangerous. Since the annexation of the Punjab, it has been found useful for facility in collecting the revenue, to lessen their number greatly." The Punjab mines yielded, in 1891, 2,206,450 maunds, valued at Rs. 1,03,427. In the Kohat District, salt is got by open quarrying not by mining as in the salt-range. The chief quarries are at Malgin which have been worked from very ancient times ; at Bhadur Khel opened in the seventh century ; and at Jatta opened about the middle of the seventeenth century. The produce of the Kohat mines, in 1891, was 632,599 maunds valued at Rs. 2,48,078. The total quantity of salt produced in the Indian empire (including Burma) in 1891, was 26,684,375 maunds valued at Rs. 51,71,945. The imports have remained more or less stationary during the last few years, seldom much exceeding ten lakhs of maunds. The mining and manufacture of salt are carried on chiefly by Government.

Mica.

Mica is sometimes used instead of glass for lanterns and doors of furnaces. It is also employed as a glazing material. In small pieces it is largely employed in India for the ornamentation of temples, banners &c.. Powdered mica is occasionally used for ornamenting cloths and pottery. Mica has recently been found in large plates measuring two

to three feet in diameter and thickness in the Nellore district, Madras Presidency. In the Bengal Presidency, it is at present obtained by mining chiefly in the district of Hazaribagh. The mica mines are on a small scale, and are owned and worked chiefly by Hindus. In 1891, the Hazaribagh mines employed nearly three thousand persons daily, and produced 2,520 maunds valued at Rs. 84,883.

Steatite.

Steatite or soapstone is obtained by mining or quarrying at various places for the manufacture of plates, bowls, vases, small idols, figures of animals &c., notably in the Salem district (Madras), in the Gya district (Behar), and in the Manbhum and Singbhum districts (Bengal). The beautiful bluish-gray soapstone which is so largely used at Agra for the manufacture of finely carved ornamental objects is obtained from a village in the Jaipur state.

Limestone.

Limestone is largely quarried for the manufacture of lime or for building and other purposes. Among the more extensively worked quarries, may be mentioned those of Katni (Jabalpur district, Central Provinces), and of the Khasi and Jaintia hills (Assam).* Lime made at these places is in great demand in Bengal. There are marble quarries in Rajputana, the best known being those situated near Jhirri in the Alwar state, at Makrana in the Jodhpur state, and near Raialo in the Jaipur state. White marble

* The out-turn of the Khasi and Jaintia quarries for 1891 was estimated at 14, 15, 257 maunds valued at Rs. 1, 39, 276.

from the last named place is largely employed for making screens known as *jalee*, which has been referred to in a previous chapter. The marble of which the Tajmahal is built was obtained from the Makrana quarries. "From distant parts of India orders for temples are sent to Makrana, and the blocks of pure marble cut and ready to be put in place are forwarded to their destination." The marble quarries near Jhirri were at one time extensively worked, but are not much worked now.

Building stones.

Besides limestone and marble, various other rocks have from very ancient times been quarried in India for building purposes —granite, gneiss, basaltic rocks, laterite, slate, and sandstone. At Gya some of the Buddhistic rails and the floorings of temples are made of granite. There are many quarries for the extraction of gneiss and granite in the Madras Presidency. Basaltic rocks are utilised for building and other purposes in parts of the Deccan, in Malwa, and in the Rajmahal hill* area. The Kangra Valley Slate Quarry Company in the Punjab raised, in 1891, slates to the value of Rs. 40,636. But, of all the building stones of India, sandstone is the most important. It was employed as long ago as the third century B. C. by the Buddhist emperor, Asoka, for the construction of *láts* or monoliths, some of which are of great size, and are partly polished. The most important of the sandstone quarries are at Fatepur Sikri, Rupas, Chunar, Mirzapur, and Pratabpur. Fatepur Sikri

* The Rajmahal Stone Company raised, in 1891, stone to the value of Rs. 1,21, 187.

and Rupas supplied stone for portions of the Taj-mahal, for Akbar's palace at Fatepur Sikri, for the Jama Masjid at Delhi, and for several other structures of note. Chunar sandstone has been largely used at Benares and many other places in the North-Western Provinces from very ancient times. The quarries of Mirzapur "with those of Partabpur and Seorajpur, have supplied Mirzapur and Allahabad with material for the construction of their buildings, both ancient and modern." †

† "Economic Geology of India" p. 545.



APPENDIX.

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The following extracts from a resolution issued by the Government of India last year indicate the steps recently taken by Government for the development of the scheme undertaken in 1880-81 for agricultural enquiry and improvement.

2. "One of the chief recommendations made in the report of the Famine Commission in 1880 was the formation of Agricultural Departments, of which the ultimate aim was to be the improvement of Indian agriculture. In 1881, the Imperial Department of Revenue and Agriculture was created for the purpose of directing the policy to be followed in carrying out the Famine Commission's recommendations; and in December of that year the Resolution was issued in which a comprehensive scheme based on the suggestions of the Famine Commission was drawn up. The Resolution commenced by explaining that before any attempt could be made to improve the agriculture of the country it was necessary to enquire into, and collect information regarding, the agricultural conditions in each province.

3. The first step to be taken in this direction was to organise the land record establishments, and during the twelve years which have since elapsed, these establishments have in most provinces been brought into fair working order, so that they can now be utilized for the collection of facts and statistics.

4. Another measure was to constitute a system of scientific enquiry by means of experts in those branches of investigation, which were beyond the scope of the ordinary establishments. With this object there have been successively established the office of Reporter on Economic products and the Civil Veterinary and Bacteriological Departments. The Departments of Meteorology and Geology already existed, but the attention of both has been called more distinctly than before to the work of practical investigation. At the same time the trustees of the Indian Museum have consented to carry out through their staff enquiries connected with Economic Entomology and Zoology; while the Botanical Survey, previously restricted to three provinces, has been extended over the whole of India.

5. None of these Departments or institutions, however, were connected with agriculture proper, and from 1882 to 1888 representations were made to the Secretary of State that the scheme of enquiry could not be completed without an agricultural expert, who should organize and develop a system of agricultural investigation in those directions in which scientific control was wanted. In 1889 Dr. Voelcker was sent out to India by the Secretary of State—"to advise on the best course to be adopted in order to apply the teachings of Agricultural Chemistry and in order to effect improvements in Indian agriculture." Dr. Voelcker's preliminary recommendations led to the appointment, in October last, of an Agricultural Chemist, who with the aid of a laboratory assistant, appointed at the same time to teach in the forest School at Dehra, will take the position of the expert asked for by the Government of India.

His duties will be necessarily connected with a larger field than that implied by the term "Agricultural Chemistry," and it is one of the objects of the present Resolution to indicate to some extent what the duties and functions of the Agricultural Chemist will be.

6. In the detailed report now submitted, Dr. Voelcker makes numerous recommendations in the direction of agricultural improvement and reform, many of which cover the same ground as those of the Famine Commission. His suggestions come, indeed, mainly within the scope of the programme set out in the Resolution of 1881, to the principles of which the Government of India still adhere as forming the basis of the scheme of agricultural enquiry and improvement ; and although his suggestions point, as did the Resolution of 1881, to the

ultimate establishment of positive measures for improvement they do so with the same proviso that "before any real improvements can be effected in agriculture, the institution, of organised enquiry into existing methods is absolutely necessary." The Government of India desire therefore, that for the present the main duty of the Agricultural Chemist should be to take his place in the scheme of enquiry, rather than to institute what may prove to be premature efforts in the direction of agricultural improvement.

7. It will, in the first place, be necessary for the Provincial Departments of Agriculture to carry out more effectively than has hitherto been done the instructions for establishing the system which in the Resolution of 1881 was briefly designated as "district analysis." The subject was discussed at the Agricultural Conference held in 1890 at Simla, but has not as yet been fully understood. The object of the scheme, was to define with some precision, through the aid of the statistics collected by the land-records agency, the tracts in each district which are subject to Famine, or to use the words of the Resolution, in which the "agricultural operations of the country are liable for any reason to fall below the standard of full efficiency." When some progress has been made in a careful analysis of agricultural tracts, the expert will be usefully associated with the Agricultural Departments in investigating the causes of failure, and in suggesting the remedies to be applied. As soon as this stage has been reached, the greater number of those recommendations of the Famine Commission and Dr. Voelcker, which deal with positive measures of remedy and improvement, will have to be taken under serious consideration and although it may be the case that in some directions inquiry has proceeded sufficiently far to justify immediate action, especially in tracts where agricultural depression is extreme, yet there is no doubt that in the main a considerable period must still be occupied in the preliminary work of investigation.

8. Another branch of enquiry is concerned with the existing methods and practices of agriculture throughout India. This will be entrusted primarily to the Agricultural Chemist. It will involve the collation and collection of facts and statistics contained in gazetteers, settlement reports, and other such sources of information, and will require both personal investigation in the field, and continual communication with the officers of the Agricultural Departments.

9. The necessity of ascertaining by continuous and scientifically-directed trial on experimental farms what are the possibilities of improving existing methods, was indicated in the Resolution of 1881, and measures have been taken in almost every province to establish farms for this purpose. The inspection of farms; the general direction of the system on which experiments are to be conducted; and the preservation of continuity in experiment will be further and important duties of the new officer.

10. The scheme of agricultural enquiry will also entail a systematic analysis of soils, water, manure, &c., in the laboratory, and these will be conducted by the Agricultural Chemist and the Assistant.

11. It will at the same time be essential that, with the co-operation of the Educational Department, measures should be taken which will render the agricultural population capable of assimilating new ideas, and of understanding any suggestions made to them, as time goes on for the improvement of their agricultural methods: and which will qualify them to take that active part in the scheme of agricultural reform, without which no effective results can be expected. The necessity of adapting the educational system to the requirements of the agricultural population was not dealt with in the Resolution of 1881. The Government of India, however, in the 25th paragraph of the Resolution on Education, issued by the Home Department in June 1888, recommended that this subject, among others, should in each province be brought under the consideration of a Committee. The question of agricultural education was also discussed in a valuable note submitted by Mr. F. A. Nicholson to the officers who reported in May, 1889, on the Agricultural Department of the Madras Presidency. In that note, Mr. Nicholson urged that in developing the efficiency of an Agricultural Department, it would be necessary to consider 'what means will render its operations more efficient by promoting the intelligence and receptivity of the ryot, by developing the agents rather than the mere methods of production, and by provoking them to take the initiative instead of waiting for an impluse *ab extra*.'"

END OF VOLUME II.